Commencement 2013

THE UNIVERSITY OF

NORTH CAROLINA

AT CHAPEL HILL

Sunday, December Fifteenth

TWO THOUSAND THIRTEEN

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MESSAGE *from the* CHANCELLOR

Welcome to your Tar Heel graduation. Each of you has accomplished so much in your years at Carolina, and we treasure this opportunity to celebrate with you as you commence the next steps of your life journey.

Families and friends of the graduates, no one could believe more in their capacity and character than you. On behalf of the Carolina faculty and staff, thank you for sharing your student with us, and congratulations as you also make a life transition.

Undergraduate, graduate and professional students, I hope that you find a moment this weekend to recall your Carolina years and realize how your time here has prepared you for your future. You have learned the tools to capture and shape your own transitions. You have developed enduring intellectual skills that will help you imagine a future you cannot yet see. Most importantly, you have developed the personal connections that will be a lasting part of your life. Carolina has been your home for a few short years, but you will always be part of the Carolina family.

Graduates, you may feel uncertain about the next steps ahead. That is to be expected. But I urge you to "trust in the you of now," as the saying goes, and I promise that you will find your path and your passion.

Please keep in touch and visit Chapel Hill. We will be here, eager to help and applaud your success. Congratulations!

CAROL L. FOLT

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ALMA MATER

The words of "Hark the Sound," UNC–Chapel Hill's alma mater, were written in 1897 by William Starr Myers, a graduating senior. The Glee Club director asked Myers to put words to the tune "Amici," and the song was first performed on June 2, 1897, as part of the Glee Club's Commencement performance in Gerrard Hall.

Soon the song was almost forgotten. When a University quartet tried a few years later to remember the words, they could recollect only the first verse and the chorus of Myers' original version. Two members of the quartet, Charles S. Mangum and Charles T. Woollen, added two verses to the one they remembered. Mangum later became a professor in the School of Medicine, and Woollen worked as the University's business manager and comptroller.

HARK THE SOUND

Hark, the sound of Tar Heel voices
Ringing clear and true,
Singing Carolina's praises,
Shouting N.C.U.!

Hail to the brightest star of all!
Clear its radiance shine!
Carolina, priceless gem,
Receive all praises thine.

For Your Information

If you have any questions regarding Commencement activities, or in the event of an emergency, please contact an usher.

Open captioning of the ceremony will be available on the video screens in the Dean Smith Center.

This Commencement program is printed prior to administering final examinations. Therefore, including degree candidates' names in this program does not represent certification that candidates have satisfactorily completed degree requirements.

All diplomas are printed after graduation and are mailed to graduates. Every effort has been made to ensure the accuracy of this program's content. Any omissions or errors are unintentional.

The COMMENCEMENT PROGRAM

Concert by the University Band	Jeffrey W. Fuchs, *Director*
Academic Procession	The Faculty Marshal Valerie Ashby, *Gordon and Bowman Gray Distinguished Term Professor, Department of Chemistry* Walker Swain, *Senior Marshal*
	The Official Party
	The Faculty
	The Candidates for the Degrees of Doctor of Philosophy, Doctor of Education and Doctor of Public Health
	The Candidates for Master's and Professional Degrees
	The Candidates for Baccalaureate Degrees SENIOR CLASS MARSHALS WILL LEAD THE GROUPS TO THEIR SEATS.
Presiding	Carol L. Folt, *Chancellor of the University of North Carolina at Chapel Hill*
National Anthem	Maria Kristen Palombo, *Class of 2014* WITH THE ENTIRE ASSEMBLAGE
Recognition of Platform Party	Carol L. Folt
Welcome Remarks	FOR THE UNIVERSITY OF NORTH CAROLINA G. Leroy Lail, *UNC Board of Governors*
	FOR THE BOARD OF TRUSTEES OF THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL W. Lowry Caudill, *Chair*
	FOR THE GENERAL ALUMNI ASSOCIATION Robyn S. Hadley, *Chair, Board of Directors*
Introduction of Commencement Speaker	Georgia Walker, *President of the Class of 2014*
Commencement Address	Kevin M. Guskiewicz, *Kenan Distinguished Professor and Co-Director, Matthew Gfeller Sport-Related Traumatic Brain Injury Research Center; Research Director, Center for the Study of Retired Athletes; Senior Associate Dean for the Natural Sciences, UNC College of Arts and Sciences*
Recognition of Doctoral Candidates	Steven W. Matson, *Dean, The Graduate School*
Introduction of Deans, Conferring of Degrees, and Chancellor's Charge to the Graduates	Carol L. Folt
Ceremonial Recognition of the Graduates	Tony Botros, *Vice President of the Class of 2014*
"HARK THE SOUND"	Maria Kristen Palombo
Academic Recessional	*Please remain in place for the recessional of the Official Party, Faculty and Candidates for Degrees – led by the Faculty Marshal and the Senior Class Marshals.*

CAROL L. FOLT

Chancellor

Carol L. Folt took office as Carolina's 11th chancellor and first woman leader on July 1, 2013.

An internationally recognized environmental scientist and award-winning teacher, Folt served as interim president of Dartmouth College during 2012-2013. She also was Dartmouth Professor of Biological Sciences at the prestigious Ivy League institution.

Folt was formally installed as chancellor on University Day, October 12th, which marked Carolina's 220th birthday. She says the transformative power of public higher education is flourishing at the University.

In her installation address, Folt laid out an ambitious agenda for the future. "I believe that Carolina can be the leader in shaping the path for the great public universities in America. By preserving excellence and innovation, access and affordability, and a deep commitment to the state, we can gather strength to innovate and meet new challenges."

An Akron, Ohio, native, Folt is a proud product of public higher education. Her parents were the first in their families to attend college. She worked her way through the University of California at Santa Barbara as a waitress, earning a bachelor's degree in aquatic biology in 1976 and a master's degree in biology two years later. She received her doctorate in ecology in 1982 from the University of California at Davis and did postdoctoral work at the W.K. Kellogg Biological Station of Michigan State University.

After joining the Dartmouth faculty in 1983, Folt rose steadily through the academic and administrative ranks. She was named associate director of Dartmouth's Toxic Metals Research Program in 1998, and two years later became associate director of the Center for Environmental Health Sciences. In 2001, she was appointed dean of graduate studies and associate dean of the faculty for interdisciplinary programs. She was promoted to dean of the faculty in 2004, tapped as acting provost in 2009, and named provost in 2010.

As interim president, Folt helped identify opportunities for greater collaboration across schools to enhance academic quality and competitiveness, oversaw growth in global partnerships, and augmented support for faculty, student and community entrepreneurship and technological innovation. She spearheaded a year-long focus on the arts, co-education and the future of higher education. As provost, she led the first strategic planning process, engaging hundreds of faculty, staff and students. Following the economic downturn, she co-led efforts to resolve a $100-million budget gap.

Folt's research has focused on the effects of dietary mercury and arsenic on human and ecosystem health, salmonid fisheries management and restoration, and global climate change. She and colleagues developed new technologies to assess mercury exposure and formed regional, national and international partnerships to shape public policy for safer waters. She is a fellow of the American Association for the Advancement of Science.

Folt is married to David Peart, a professor of biological sciences at Dartmouth. They have two adult children, Noah and Tessa.

KEVIN M. GUSKIEWICZ

The Commencement Speaker

Kevin Guskiewicz, a world-renowned concussion expert and MacArthur "genius" grant winner, is the Kenan Distinguished Professor and co-director of the Matthew Gfeller Sport-Related Traumatic Brain Injury Research Center and research director of the Center for the Study of Retired Athletes in the Department of Exercise and Sport Science at UNC-Chapel Hill. He holds joint appointments in the Department of Orthopaedics, the UNC Injury Prevention Research Center and the Doctoral Program in Human Movement Science. He is also the senior associate dean for the natural sciences in the College of Arts and Sciences.

In August 2013, Time magazine called Guskiewicz an "impact investigator" worthy of inclusion on its list of "Game Changers – America's top innovators and problem-solvers." His work has largely focused on improving safety in football – a sport he loves. He has studied concussions since he was a graduate assistant on the training staff of the Pittsburgh Steelers. He leads the NFL's subcommittee on safety equipment and playing rules, and has been working with the league over the last decade to develop safer ways to play the game.

Guskiewicz joined the University's department of exercise and sport science in 1995, and served as head athletic trainer for the women's lacrosse team for three years. In 1998, he became director of the concussion-testing program for all UNC teams. At Carolina, his long-term epidemiological study on hundreds of retired football players uncovered a correlation between the number of concussions a player suffered and the appearance of dementia, depression and other brain dysfunction later in life.

To make football a safer sport, Guskiewicz convinced ESPN to cancel a Sunday night feature on the most spectacular hits of the day's NFL games. He also helped persuade the NFL to move kickoffs from the 30 yard line to the 35 yard line, resulting in 33 percent more no-hit touchbacks the following season.

During his experience with the Steelers, Guskiewicz saw that trainers had to lean heavily on the subjective accounts of athletes – reports of dizziness, headaches, memory loss and the like. He developed objective tests that take much of the guesswork out of diagnosing concussions and studied the long-term effects that repeated concussions can have on cognitive function. More recently, he has focused on preventing injuries in the first place.

In 2004, Guskiewicz and his colleagues began placing accelerometers in the helmets of UNC football players. Helmets outfitted with accelerometers measure the impact of a blow to the head and send data to the sideline, where a significant collision sets off the head trainer's pager, enabling him to watch the player more closely for signs of concussion.

Guskiewicz has used part of his MacArthur Foundation award to work with the military on concussions that are caused by blast injuries. Those collaborations have focused on helping the military quickly and effectively identify the seriousness of injuries and recovery times so that a soldier can be sent to an appropriate treatment location for care.

Officers of the Class of 2013

Tim Palmer, *President*
Nora Chan, *Vice President*
Brennan Fox, *Chief Marshal*
C. Hawkins '00, *Advisor*
Bianca Bell '11, *Annual Fund Liaison*

Officers of the Class of 2014

Georgia Walker, *President*
Tony Botros, *Vice President*
Rachel Uhlman, *Chief Marshal*
C. Hawkins '00, *Advisor*
Jordan Sutton Farthing '12, *Annual Fund Liaison*

Marshals of the Class of 2013

Kelly Blessing
Jerry Bowens
Sara Brady
Derek Buchanan
Lindsay Casper
Josh Clinard
Emily Ellis
Cheyenne English
Ashley Fox
Jordan Graves
Jane Hall
Abby Harrill
Janae Hinson
Colin Hodges
Mike Hourigan III
Laura Kessler
Sarah Mafe
Logan Mauney
Denzel McCollum
Maddy Merrill
Khadija Mohamed
Symone Morales
Thomas Mosley
Antoinette Newsome
Moni Oyedepo
Amber Pace
Nish Patel
Swati Rayasam
Ray Sawyer
Simon Scholl
Lauren Seiple
Kara Simpson
Kathryn Singsank
Justin Sodoma
Kimmy Summers
Emily Tracy
Becca Vinson
Jeff White

Marshals of the Class of 2014

Zachary Alexander
Cody Allen
Andrea Alonso
Ana Amaya
Gabriel Baylor
Mary Morgan Bitler
Michael Cash
Tricia Cleppe
Chelsey Dulaney
Chris Felix
Seve Gaskin
Shelby Goerne
Kathleen Goolsby
Amy Hammond
Breanna Harris
Alex Jackson
Suzanne Jasmine
Phillip Krouse
Chandler Leik
Ashcon Livingston
Farrell Murphy
Derek Murray
Beejal Patel
Harsh Shah
Sara Shariff
Melissa Shulman
LaDarian Smith
Anna Spickard
Walker Swain
Jessi Tremayne
Cheyenne Turner
Roli Tyagi
Warner Underwood
Neha Vennekkat
Anna Volz
Corinne White
Tommy Yandle

Graduate and Professional Student Federation Officers

Kiran Bhardwaj, *President*
Julie Lauffenburger, *Vice President for Internal Affairs*
Xin Liu, *Vice President for External Affairs*
Dylan Glatt, *Chief of Staff*
Autumn McClellan, *Treasurer*
JoEllen McBride, *Secretary*

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EX-OFFICIO
Chapel Hill, N.C.

CAROLINA ANNUAL FUND *and* SENIOR CAMPAIGN

Congratulations, graduates! There is no doubt that your experience at Carolina has included unparalleled opportunities and that your degree will open many doors for you in the future. As Carolina students, you have been touched every day by private gifts to Carolina that maintain and enhance the University's tradition of excellence. Annual gifts improve the lives of students, faculty and staff. From scholarships to new research buildings and equipment, to access to incredible performances at Memorial Hall, to more than 6 million volumes in the libraries across campus, private gifts have impacted every aspect of campus life.

You're invited to support UNC–Chapel Hill through the Senior Campaign for Carolina. You can make a gift to any part of the University that is meaningful to you — your major, a professorship, a student organization, scholarships and student aid, or campuswide programs. To make an immediate difference where it is needed the most, consider supporting the Chancellor's Unrestricted Fund.

All gifts to Carolina are included as participation in the Senior Campaign and Annual Fund. Thank you to those who have already made your gift! You can still give online at annualfund.unc.edu/gift or by mail to P.O. Box 309, Chapel Hill, N.C. 27514-0309. For more information about the Senior Campaign, visit annualfund.unc.edu/seniorcampaign.

WELCOME YOUNG ALUMNI!

As you transition from students to alumni, we encourage you to keep up with young alumni events and Carolina news through the Carolina Annual Fund's young alumni social media: Facebook (UNCYoungAlumni), Instagram (@UNCYoungAlumni), and Twitter (@UNCYoungAlumni).

Through our social media efforts you can connect with fellow recent Carolina graduates in your area, participate in local events and social activities, and help Carolina stay strong by advocating philanthropy and support for the University among your peers. For more information about young alumni programs, visit youngalumni.unc.edu.

DEGREES *and* CERTIFICATES

The following is a list of all degrees and certificates available to students at the University of North Carolina at Chapel Hill.

UNDERGRADUATE CERTIFICATES

Certificate in Community Preparedness and Disaster Management
Certificate in Cytotechnology
Certificate in Dental Hygiene
Certificate in Radiography
Certificate in Sports Communication

UNDERGRADUATE DEGREES

Bachelor of Arts with a major in:
African and Afro-American Studies; American Studies; Anthropology; Archaeology; Art History; Asian Studies; Biology; Chemistry; Classics; Communication Studies; Comparative Literature; Computer Science; Contemporary European Studies; Dramatic Art; Economics; English; Environmental Studies; Exercise and Sport Science; Geography; Geological Sciences; Germanic and Slavic Languages and Literatures; Global Studies; History; Interdisciplinary Studies; Latin American Studies; Linguistics; Management and Society; Mathematics; Music; Peace, War, and Defense; Philosophy; Physics; Political Science; Psychology; Public Policy; Religious Studies; Romance Languages; Sociology; Studio Art; Women's and Gender Studies
Bachelor of Arts in Business Journalism
Bachelor of Arts in Education with a major in:
Child Development and Family Studies; Elementary Education; Middle Grades Education
Bachelor of Arts in Journalism and Mass Communication
Bachelor of Fine Arts
Bachelor of Music
Bachelor of Science with a major in:
Applied Science; Biology; Chemistry; Computer Science; Environmental Sciences; Geological Sciences; Human Biology; Mathematical Decision Sciences; Mathematics; Physics; Psychology
Bachelor of Science in Business Administration
Bachelor of Science in Clinical Laboratory Science
Bachelor of Science in Dental Hygiene
Bachelor of Science in Information Science
Bachelor of Science in Nursing
Bachelor of Science in Pharmaceutical Sciences
Bachelor of Science in Public Health with a major in:
Biostatistics; Environmental Health Sciences; Health Policy and Management; Nutrition
Bachelor of Science in Radiologic Science

POSTBACCALAUREATE AND POST-MASTER'S CERTIFICATES

Postbaccalaureate Certificate in Auditory Learning in Young Children
Postbaccalaureate Certificate in Business Journalism
Postbaccalaureate Certificate in Core Public Health Concepts
Postbaccalaureate Certificate in Field Epidemiology
Postbaccalaureate Certificate in Global Health
Postbaccalaureate Certificate in Maternal and Child Health Leadership
Postbaccalaureate Certificate in Occupational Health Nursing Specialty
Postbaccalaureate Certificate in Radiologist Assistant
Postbaccalaureate Certificate in Technology and Communication
Post-Master's Certificate in Information and Library Science
Post-Master's Certificate in Public Health Leadership

GRADUATE DEGREES

Master of Accounting
Master of Arts in the discipline of:
American Studies; Anthropology; Art History; Biology; Chemistry; Classics; Communication Studies; Comparative Literature; Ecology; Education; English; Exercise and Sport Science; Folklore; Geography; Geological Sciences; Germanic Languages; German Studies; Global Studies; History; Linguistics; Mass Communication; Mathematics; Musicology; Philosophy; Political Science; Psychology; Public Policy; Religious Studies; Romance Languages and Literatures; Russian and East European Studies; School Psychology; Slavic Languages and Literatures; Sociology
Master of Arts in Teaching
Master of Arts in Technology and Communication
Master of Business Administration
Master of Clinical Laboratory Science
Master of City and Regional Planning
Master of Education in the discipline of:
Education; School Counseling; School Psychology
Master of Fine Arts in the discipline of:
Dramatic Art; Studio Art
Master of Healthcare Administration
Master of Laws
Master of Physical Therapy
Master of Public Administration
Master of Public Health in the discipline of:
Biostatistics; Environmental Sciences and Engineering; Epidemiology; Health Behavior; Health Policy and Management; Maternal and Child Health; Nutrition; Public Health Leadership
Master of Radiologic Science
Master of School Administration
Master of Science in the discipline of:
Biochemistry and Biophysics; Biology; Biomedical Engineering; Biostatistics; Cell and Developmental Biology; Cell and Molecular Physiology; Chemistry; Computer Science; Dental Hygiene Education; Ecology; Economics; Endodontics; Environmental Sciences and Engineering; Genetics and Molecular Biology; Geological Sciences; Human Movement Science; Marine Sciences;

Materials Science; Mathematics; Microbiology and Immunology; Neurobiology; Nutrition; Occupational Therapy; Operative Dentistry; Oral and Maxillofacial Pathology; Oral and Maxillofacial Radiology; Oral and Maxillofacial Surgery; Oral Biology; Orthodontics; Pathology; Pediatric Dentistry; Periodontology; Pharmaceutical Sciences; Pharmacology; Physics; Prosthodontics; Rehabilitation Counseling and Psychology; Speech and Hearing Sciences; Statistics and Operations Research; Toxicology

Master of Science in Clinical Research
Master of Science in Disaster Management
Master of Science in Environmental Engineering
Master of Science in Information Science
Master of Science in Library Science
Master of Science in Management
Master of Science in Nursing
Master of Science in Public Health in the discipline of:
Biostatistics; Environmental Sciences and Engineering; Epidemiology; Health Behavior; Health Policy and Management; Maternal and Child Health
Master of Science in Recreation Administration
Master of Social Work
Doctor of Nursing Practice
Doctor of Philosophy in the discipline of:
American Studies; Anthropology; Art History; Biochemistry and Biophysics; Bioinformatics and Computational Biology; Biology; Biomedical Engineering; Biostatistics; Business Administration; Cell and Developmental Biology; Cell and Molecular Physiology; Chemistry; City and Regional Planning; Classics; Communication Studies; Comparative Literature; Computer Science; Ecology; Economics; Education; English; Environmental Sciences and Engineering; Epidemiology; Genetics and Molecular Biology; Geography; Geological Sciences; Germanic Languages; German Studies; Health Behavior; Health Policy and Management; History; Human Movement Science; Information and Library Science; Marine Sciences; Mass Communication; Materials Science; Maternal and Child Health; Mathematics; Microbiology and Immunology; Musicology; Neurobiology; Nursing; Nutrition; Occupational Science; Oral Biology; Pathology; Pharmaceutical Sciences; Pharmacology; Philosophy; Physics; Political Science; Psychology; Public Policy; Religious Studies; Romance Languages and Literatures; School Psychology; Social Work; Sociology; Speech and Hearing Sciences; Statistics and Operations Research; Toxicology
Doctor of Public Health in the discipline of:
Biostatistics; Health Behavior; Health Policy and Management; Maternal and Child Health; Nutrition

PROFESSIONAL DEGREES
Doctor of Audiology
Doctor of Dental Surgery
Doctor of Education in the discipline of:
Curriculum and Instruction; Educational Leadership
Doctor of Medicine
Doctor of Pharmacy
Doctor of Physical Therapy
Juris Doctor

THE BELL TOWER

The Morehead–Patterson Memorial Bell Tower was given to the University in 1931 by John Motley Morehead III and Rufus Lenoir Patterson. Its 14-bell carillon rings both manually and electronically to call students to class, provide twilight music and serenade the dispersing crowd after football games. Rising 172 feet, the tower is surrounded by a hedge and lawn designed by William C. Coker, botany professor and creator of the campus Arboretum.

CANDIDATES *for* GRADUATE DEGREES

December 2013 | *Degree candidates' names are followed by their area of major study, dissertation or project title and the name of their doctoral advisor.*

The Graduate School

ESTABLISHED 1903
Dean Steven W. Matson

DOCTOR OF PHILOSOPHY

Melissa Sue Anderson, *Microbiology and Immunology,* Development of Sociomicrobial Communities: Contact Dependent Growth Inhibition in Burkholderia. Professor Peggy A. Cotter.

Benjamin Christopher Bagley, *Philosophy,* Improvisational Agency. Professor Susan Wolf.

Anna Marie Belle, *Chemistry,* Exploring Local Neuronal Circuitry with Controlled Iontophoresis. Professor R. Mark Wightman.

Stephanie Elaine Bettis, *Chemistry,* Utilizing Ultrafast Spectroscopy to Characterize Energy and Electron Transfer in Ru^{II} Based Molecular Assemblies Designed for Solar Fuel Devices. Professor John Papanikolas.

Lauren V. Biddle, *Political Science,* Corruption in Democratic Brazil. Professor Jonathan Hartlyn.

Will Boone, *Musicology,* Hearing Faith: Musical Practice and Spirit-Filled Worship in a Contemporary African American Church. Professor Jocelyn R. Neal.

Jason Lee Bremner, *City and Regional Planning,* Population Mobility and Livelihood Diversification Among Indigenous Peoples of the Ecuadorian Amazon. Professor Richard E. Bilsborrow.

Naomi Chana Brownstein, *Biostatistics,* Analysis of Time-to-Event Data, Intermediate Phenotypes, and Sparse Factors in the OPPERA Study. Professors Jianwen Cai and Eric Bair.

Ryan Matthew Bullis, *Pharmaceutical Sciences,* Investigating the Role of N-deacetylase/N-sulfotransferase 2 in Heparin Biosynthesis. Professor Jian Liu.

Ryan C. Burk, *Economics,* Technology Upgrading in Imperfectly Competitive Markets. Professor Brian McManus.

Andrea Elizabeth Byrnes, *Biostatistics,* Quantitative Methods for Evaluating Association Between Multiple Rare Genetic Variants and Complex Human Traits. Professor Yun Li.

Ezequiel R. Cabezon, *Economics,* Essays on Monetary Policy in Open Economies. Professor Richard Froyen.

Luke Campagnola, *Neurobiology,* Mapping the Functional Connectivity of the Mouse Anteroventral Cochlear Nucleus. Professor Paul B. Manis.

Johnavae Elaine Campbell, *Education,* The Impacts of Using a Collaborative Evaluation Approach in Higher Education: A Case Study of Local YMCAs Providing College Access Services. Professor Rita O'Sullivan.

Reginald DeVon Cannady, *Neurobiology,* Alcohol Self-Administration and Relapse-Like Behavior: A Functional Role for Enhanced Activity at AMPA Receptors. Professors Clyde W. Hodge and Joyce Besheer.

Whitney P. Caron, *Pharmaceutical Sciences,* The Mononuclear Phagocyte System as a Phenotypic Probe for Nanoparticle Pharmacokinetics and Pharmacodynamics in Preclinical and Clinical Systems. Professor William C. Zamboni.

Avery Ted Cashion, *Biomedical Engineering,* Instrumentation Approaches to Biological System Assessment, Guided MSC Differentiation, and Functional Tissue Engineering. Professor Robert G. Dennis.

Kai Chen, *Chemistry,* A Biomimetic Approach Toward Red Blood Cell Substitutes Based on Print Hydrogels. Professor Joseph M. DeSimone.

Mary Elizabeth Basile Chopas, *History,* Law, Security and Ethnic Profiling: Italians in the United States During World War II. Professor Wayne E. Lee.

Chen-Rui Chou, *Computer Science,* Regression Learning for 2D/3D Image Registration. Professor Stephen M. Pizer.

Kevin Chu, *Pharmaceutical Sciences,* PRINT® Nanoparticle Parameters to Improve Docetaxel PK/PD. Professor Joseph M. DeSimone.

Pei-Hsuan Chu, *Pharmacology,* Dissecting the Role of Kinase Isoforms Using New Tools for Activation and Inactivation of Kinases In Vivo. Professor Klaus M. Hahn.

Wonil Chung, *Biostatistics,* Bayesian Parametric and Nonparametric Methods for Multiple Quantitative Trait Loci (QTL) Mapping and SNP-Set Analysis. Professor Fei Zou.

Jennifer J. Clark, *Biostatistics,* Estimation and Hypothesis Testing with Additive Kernel Machines for High-Dimensional Data. Professor Michael Wu.

Elizabeth Jane Cline, *Chemistry,* Application of Dynamic Combinatorial Chemistry to Identify New Compounds that Bind to G-Quadruplex DNA. Professor Marcey L. Waters.

Caitlin Collins, *Cell and Molecular Physiology,* Understanding PECAM-1-Mediated Mechanotransduction: From The Protein to the Vessel. Professor Ellie Tzima.

Jason Brian Cook, *Neurobiology,* Ethanol Alters the GABAergic Neuroactive Steroid (3á,5á)-3-Hydroxypregnan-20-One (3á,5á-THP or Allopregnanolone) at Local Brain Sites: Significance of Local 3á,5á-THP Increases in the Ventral Tegmental Area. Professor A. Leslie Morrow.

Michael Thomas Corbett, *Chemistry,* Complexity-Building Deracemization and Desymmetrization Methodologies. Professor Jeffrey S. Johnson.

Evan Andrew Couzo, *Environmental Sciences and Engineering,* Air Quality Models and Unusually Large Ozone Increases: Identifying Model Failures, Understanding Environmental Causes, and Improving Modeled Chemistry. Professor William Vizuete.

Taoran Cui, *Physics and Astronomy,* Structural and Physical Properties of Torsional Carbon Nanotube Devices by Electron Diffraction and Microscopy. Professors Sean Washburn and Lu-Chang Qin.

Tianqu Cui, *Environmental Sciences and Engineering*, Secondary Organic Aerosol Formation from Alpha-Pinene and Toluene: Laboratory Studies Examining the Role of Pre-Existing Particles, Relative Humidity and Oxidant Type. Professor Jason D. Surratt.

Tim Cupery, *Sociology,* Government Involvement in Religion: Causes and Effects of Open Religious Markets. Professor Kenneth A. Bollen.

Matthew Kyle Daddysman, *Chemistry,* Fluorescent Microscopy in the Nucleus: Investigating Protein Diffusion and Binding in Live Cells. Professor Christopher J. Fecko.

Stephen Michael Daigle, *Physics and Astronomy,* Low Energy Proton Capture Study of the 14N(p,γ)15O Reaction. Professor Arthur E. Champagne.

Bryan Shroyer Der, *Biochemistry and Biophysics,* Computational Design of Zinc Binding Sites at Protein Interfaces and Enzyme Active Sites. Professor Brian Kuhlman.

Nicholas Carl Dobes, *Chemistry,* The Isolation of Primary Canine Satellite Cells Utilizing Microarray Technologies. Professor Nancy L. Allbritton.

Darrell R. Dubose, *Pharmacology,* P2Y Receptor Trafficking in Polarized Epithelial Cells. Professor Robert A. Nicholas.

Shellie Dawn Ellis, *Health Policy and Management,* Declining Overuse of Hormone Therapy for Localized Prostate Cancer: Predictors of Reimbursement Responsiveness and Emerging Patterns of Care. Professor William R. Carpenter.

Joseph Erba, *Journalism and Mass Communication*, "That's What They See on TV, That's How They View Our Culture." Exploring the Relationship Between Cultural Identification and Media Representations of Latina/os, and Latino Students' Experiences, Identity Development and Relationship With the University They Attend. Professor Lucila C. Vargas.

Kiely Flanigan, *Communication Studies,* Life as a Work of Art: The Becoming of Professional Management Consultants. Professor Steve May.

Jacob Hershel Forstater, *Physics and Astronomy,* Anomalous Protein Aggregation on Nanotubular Titanium Dioxide. Professor Yue Wu.

Jacob Richard Fowler, *Mathematics,* Rational Homology Disk Smoothing Components of Weighted Homogeneous Surface Singularities. Professor Jonathan Wahl.

David Fragoso Gonzalez, *Economics,* Essays on Applied Information Economics Theory. Professor Gary Biglaiser.

Charles Brandon Frederick, *Biomedical Engineering,* Segmenting the Male Pelvic Organs from Limited Angle Images with Application to ART. Professors David S. Lalush and Stephen M. Pizer.

Lisa Ann Goble, *Public Policy,* Evaluating the Influence of University Organizational Characteristics and Attributes on Technology Commercialization. Professor Maryann P. Feldman.

Qi Gong, *Statistics and Operations Research,* Three Stochastic Models for Order Book Dynamics. Professor Vidyadhar Kulkarni.

Adam David Gracz, *Cell and Molecular Physiology,* Intrinsic and Extrinsic Regulation of Potency in the Intestinal Stem Cell Niche. Professor Scott T. Magness.

Beezly Sultana Groh, *Biochemistry and Biophysics,* A Role for the CRL4-WDTC1 E3 Ligase in the Suppression of Adipogenesis. Professor Yue Xiong.

Mahua Guha, *Business Administration,* Dynamics of Organizational Routines in Declining Firms When Compared to Their Matched Survivors: In the U.S. Chemical and Allied Products Industry (SIC: 2800). Professor Hugh O'Neill.

Min Jin Ha, *Biostatistics,* Graphical Models for High Dimensional Genomic Data. Professor Sun Wei.

E. Ashley Hall, *English,* Emergent Design: Tracing and Studying Knowledge Transfer Through Composition Networks. Professor Daniel Anderson.

Hye-Sung Han, *City and Regional Planning,* A Longitudinal Analysis of the Linear and Nonlinear Impacts of Housing Abandonment on Neighborhood Property Values. Professor William M. Rohe.

Katy Margaret Harper, *Psychology,* An Investigation of the Relationship Between Therapist Characteristics and Alliance in Group Therapy for Individuals with Treatment-Resistant Auditory Hallucinations. Professor Davie L. Penn.

Guy Aaron Hobbs, *Biochemistry and Biophysics,* Regulation of Ras and Rho GTPases by Post-Translational Modification: Cysteine Oxidation and Ubiquitination. Professor Sharon L. Campbell.

Jameson Holden, *Biomedical Engineering,* Sensory Perceptual Metrics: Design and Application of Biologically Based Methods for the Assessment of Systemic Cortical Alterations. Professor Mark Tommerdahl.

Patrick Emmet Horn, *English,* Narrative Empathy for "the Other" in American Literature, 1845–1945. Professor Rebecka R. Fisher.

Devin Kerry Hubbard, *Biomedical Engineering,* Electroceutical Technology: Anti-inflammatory Effects of 40-160 T/S Inductively Coupled Electrical Stimulation (ICES) in the Acute Inflammation Model. Professor Robert G. Dennis.

Lauren Parker Huff, *Pharmacology,* Impact of Subcellular Localization on Oncogenic Functions of the RhoGEF Ect2 and on Its Rho GTPase Targets. Professor Adrienne D. Cox.

Danielle N. Johnson, *English,* "I'm Glad I Gave All My Heart": The Fiction of Lee Smith. Professor Minrose C. Gwin.

Adam W. Jordan, *Education,* A Cluster-Analytic Approach to Understanding the Life Values of North Carolina Public Alternative School Teachers. Professor Melissa S. Miller.

Zakaria S. Khondker, *Biostatistics,* Bayesian Penalized Methods for High-Dimensional Data. Professors Joseph G. Ibrahim and Hongtu Zhu.

David William Kikuchi, *Biology,* Mechanisms of Adaptation in Coral Snake Mimicry. Professor David W. Pfennig.

Justin Robert Kirschbrown, *Materials Science,* Direct Imaging of Ultrafast Charge Carrier Dynamics in Semiconducting Nanowires Using Two-Photon Excitation and Spatially Separated Pump-Probe Microscopy. Professor John M. Papanikolas.

Rachel Kitson, *School Psychology,* An Examination of Variations of Verbal Memory Performance in a Population of Children Who Have Been Maltreated. Professor Steve E. Knotek.

Pamela Whitney Klein, *Epidemiology,* An Evaluation of an Expanded HIV Testing Program in North Carolina Sexually-Transmitted Disease Clinics. Professors William C. Miller and Peter A. Leone.

Elizabeth R. Knight, *Neurobiology,* Immune Molecules Regulate Medulloblastoma and Neuronal Apoptosis. Professor Mohanish Deshmukh.

Ahyeon Koh, *Chemistry,* Nitric Oxide-Releasing Polyurethane Membranes for Implantable Electrochemical Glucose Sensors. Professor Mark H. Schoenfisch.

Kimberly Noelle Kutz, *History,* Lincoln's Ghosts: The Posthumous Career of an American Icon. Professor John F. Kasson.

Hillary Anne Langley, *Psychology,* The Socialization of Children's Memory: A Longitudinal Examination of Maternal Elaborative Conversational Style, Children's Autobiographical Memory, and Children's Deliberate Memory Performance. Professor Peter A. Ornstein.

Rylan Scott Larsen, *Cell and Molecular Physiology,* Subtype-Specific Roles for Presynaptic NMDA Receptors in Experience-Dependent Plasticity and Visual Cortical Development. Professor Benjamin D. Philpot.

Hana Lee, *Biostatistics,* Marginal Structural Cox Models with Case-Cohort Sampling. Professors Michael G. Hudgens and Jianwen Cai.

Nelson Lee, *Statistics and Operations Research,* Design and Control of Service Centers. Professor Vidyadhar G. Kulkarni.

Jessica Kate Levy, *Maternal and Child Health,* The Public and Private Sector Family Planning Supply Environments and Their Influence on Contraceptive Use in Urban Nigeria. Professor Sian L. Curtis.

Jiang Li, *Health Behavior,* Understanding Pathways to Weight Loss Among Employees and Organizations Enrolled in the WAY to Health Worksite-Based Weight Loss Study. Professor Laura Linnan.

Rachael Marie Liesman, *Microbiology and Immunology,* Impact of the Non-Structural 2 Protein on Respiratory Syncytial Virus Pathogenesis. Professor Raymond J. Pickles.

Lauren Stone Ligon, *Microbiology and Immunology,* Suppressor Analysis to Identify Proteins that Work with the Mycobacterium smegmatis SecA2 Protein Export System. Professor Miriam Braunstein.

Ja-an Lin, *Biostatistics,* Statistical Methods for Imaging Genetic Data. Professors Hongtu Zhu and Joseph G. Ibrahim.

Gregory A. Lipton, *Religious Studies,* Making Islam Fit: Ibn 'Arabi and the Idea of Sufism in the West. Professor Carl W. Ernst.

Lan Liu, *Biostatistics,* Causal Inference With Interference. Professor Michael G. Hudgens.

Christian Loew, *Philosophy,* Causation and Other Asymmetries in Time. Professor Laurie Paul.

Yen Sia Low, *Environmental Sciences and Engineering,* Toxicity Prediction Using Multi-disciplinary Data Integration and Novel Computational Approaches. Professors Alexander Tropsha and Ivan Ruysn.

Shawn Michael Lyons, *Biology,* Post-Transcriptional Regulation of Histone mRNAs at the Level of Decay and 3' End Processing. Professor William F. Marzluff.

Brittain Lynn Mahaffey, *Psychology,* Evaluating a Cognitive-Behavioral Model of Pathological Mirror Gazing: Implications for the Maintenance of Anxiety and Appearance Dissatisfaction in Body Dysmorphic Disorder. Professor Jonathan S. Abramowitz.

Meredith Marie Malburne-Wade, *English,* Revision as Resistance in 20th-Century American Drama. Professor Maria DeGuzman.

Sarah Elizabeth Marsh, *English,* The Regency Novel and the British Constitution: Austen, Brunton, Shelley and the Culture of Romantic Decline. Professor Jeanne Moskal.

Eliza Mason, *Microbiology and Immunology,* Virulence Gene Regulation in Bordetella. Professor Peggy A. Cotter.

Emily Elizabeth McKendry-Smith, *Sociology,* Old Gods, New Religions and Modern Marriages in Nepal. Professor Lisa D. Pearce.

Ian James McNeil, *Chemistry,* Investigation of Dispersive Kinetics in the Time-Dependent Photoluminescence of Dye-Sensitized Nanoparticle Films. Professor Christopher J. Fecko.

Cheryl Naomi Miller, *Microbiology and Immunology,* A Genetic and Biochemical Approach to Identify Function of Novel Proteins in Francisella tularensis. Professor Tom H. Kawula.

Kylee Marie Miller, *School Psychology,* Weighing in on the Relationship Between Macronutrient Intake, Weight Status, Cognitive Functioning, and Academic Performance in School-Aged Children. Professor Rune J. Simeonsson.

THE CHANCELLOR'S MEDALLION

The chancellor's medallion, an emblem of the office of chancellor, is worn during the University's ceremonial occasions. The sterling silver disk, which is three inches in diameter and seven ounces Troy weight, was given to the University by John Sanders, professor emeritus and former director of the UNC Institute of Government, and his wife, Ann Beal Sanders. Modeled by sculptor Pete Hinton and bearing the University seal, it was first worn by Chancellor Paul Hardin during the 1994 University Day convocation. This year, the medallion was updated with a silver chain of office that includes thin rectangles engraved with the names and dates of service of the 10 previous UNC chancellors. It also features links made in the shape of the Old Well and the Davie Poplar leaves, both icons of the Carolina campus.

THE FIRST CAROLINA DIPLOMA

In September 1796 Carolina student Davie Gillespie began working with a group of men to determine the Southern boundary of the United States. His instructors gave Gillespie a document to carry as proof that he had been a student at the University of North Carolina. The document, now in the Library of Congress, was signed by his professors and ended with the statement, "We thought it proper to give him this certificate."

The University's first graduating class in 1798 included Hinton James, the first student to enroll. Seven men received the first documents that by today's standards can be called UNC–Chapel Hill diplomas. One of the original diplomas is in the Southern Historical Collection in Wilson Library.

During the University's early years, commencement at Carolina was a time for examinations and promotions to higher classes. There was a commencement, but no degrees awarded and no graduation.

Angela Marie Mitchell, *Microbiology and Immunology,* Modulation of Adeno-Associated Virus Transduction by the Promyelocytic Leukemia Protein, Arsenic Trioxide, and Proteasome Inhibitors. Professor Richard Jude Samulski.

Irina Mordukhovich, *Epidemiology,* Vehicular Traffic Exposure to Polycyclic Aromatic Hydrocarbons and Breast Cancer Risk. Professor Marilie Gammon.

Alane Elizabeth Murdock, *Maternal and Child Health,* Breastfeeding and Contraceptive Use: Analysis of a Statewide Survey. Professor Miriam Labbok.

Alison Colleen Neff, *Communication Studies,* Generation "Fly to Fly": Urban Transformation, New Cosmopolitanism, and the Politics of Women's Voicing in Dakar, Senegal. Professors Christopher T. Nelson and Lawrence Grossberg.

Jerrod Allen Nelms, *Epidemiology,* Unemployment Change and Homicide: An Exploration of the National Violent Death Reporting System. Professor David Richardson.

Myoung-Ryul Ok, *Materials Science,* Soft Lithographic Patterned Architectures in Dye Sensitized Solar Cells. Professor Edward T. Samulski.

Matthew James O'Meara, *Computer Science,* A Features Analysis Tool for Assessing and Improving Computational Models in Structural Biology. Professor Jack S. Snoeyink.

Erol James Ozmeral, *Psychology,* The Effects of Hearing Impairment in the Ability to Glimpse Speech in a Spectro-Temporally Complex Noise. Professor Joseph W. Hall III.

Walter Edward Palmer, *Human Movement Science,* Changes in Physical Activity In Community-Dwelling Older Adults Associated With the Matter of Balance Volunteer Lay Leader Model Program. Professor Vicki S. Mercer.

Jia Pan, *Computer Science,* Efficient Configuration Space Construction and Optimization. Professor Dinesh Manocha.

Timothy David Perry, *Psychology,* Relationships Between Sub-Clinical Autistic Traits, Cognitive Substrates, And Social Functioning in a Typically Developing College Sample. Professor David L. Penn.

Nathan D. Pfeifer, *Pharmaceutical Sciences,* Impact of Hepatic Transporter Multiplicity and Loss-of-Function on Hepatocellular Distribution and Excretion of Drugs. Professor Kim Brouwer.

Bradley David Proctor, *History,* Whip, Pistol and Hood: Ku Klux Klan Violence in the Carolinas During Reconstruction. Professor W. Fitzhugh Brundage.

Elizabeth Anne Proctor, *Bioinformatics and Computational Biology,* Inhibiting the Formation of ALS-Relevant SOD1 Oligomers. Professor Nikolay V. Dokholyan.

Chaitanya Prakash Puranik, *Oral Biology,* Effect of Fluoride on Parathyroid Hormone Secretion. Professor Eric T. Everett.

Tracy Michelle Raines, *Biology,* Defining the Role of the Cytokinin Response Factors (CRFs) in Arabidopsis thaliana. Professor Joseph Kieber.

Naim Ur Rashid, *Biostatistics,* Model-Based Approaches for the Detection of Biologically Active Genomic Regions From Next Generation Sequencing Data. Professors Joseph G. Ibrahim and Wei Sun.

Neal R. Rasmussen, *Genetics and Molecular Biology,* Elucidating the Role of the Receptor Tyrosine Kinase Ror2 Within the Wnt Pathway And Its Contributions to Renal Cell Carcinoma Tumorigenesis. Professor W. Kimryn Rathmell.

Sumita Rege, *Occupational Science,* Looking Beyond: A Study of Blogging and What It Tells Us About Occupations. Professor Ruth Humphry.

Bryan Timothy Richardson, *Pharmacology,* Defining the Molecular Mechanisms of the Cerebral Cavernous Malformation Proteins. Professor Gary L. Johnson.

Ned Richardson-Little, *History,* Between Dictatorship and Dissent: Ideology, Legitimacy, and Human Rights in East Germany, 1945–1990. Professor Konrad H. Jarausch.

Joseph E. Rittiner, *Pharmaceutical Sciences,* Extracellular and Intracellular Regulation of G Protein-Coupled Receptor Signaling. Professor Mark J. Zylka.

Lindsay Faircloth Rizzardi, *Genetics and Molecular Biology,* Epigenetic Factors are Dynamically Regulated Throughout the Cell Cycle and are Required for Efficient DNA Replication. Professor Jeanette G. Cook.

Ryan Rogers, *Mass Communication,* "i" Play: The Psychological Effects of Customized Feedback in Videogames. Professor Sriram Kalyanaraman.

Jason Micah Roos, *Sociology,* Knowledge, Science, and Religion in the United States: An Analysis of Factors That Contribute to Acceptance and Rejection of Contested Knowledge at the Intersection of Science and Religion. Professors Kenneth A. Bollen and Andrew J. Perrin.

Virginia Senkomago, *Epidemiology,* The Role of Human Papillomavirus (HPV) Viral Load in Penile HPV Infection and Clearance in Young Kenyan Men. Professor Jennifer S. Smith.

Julia Madeleine Shadur, *Psychology,* Parent Emotion Socialization and Emotion Regulation in Substance Abusing Families. Professor Andrea M. Hussong.

Jeremy Simon, *Bioinformatics and Computational Biology,* Characterization of Chromatin Dysregulation in Cancer Through Analysis of Fresh and Archival Human Samples. Professor Ian J. Davis.

Danielle Lynaé Slomberg, *Chemistry,* Role of Nanomaterial Physicochemical Properties on Fate and Toxicity in Bacteria and Plants. Professor Mark H. Schoenfisch.

Elizabeth Parish Smith, *History,* Southern Sirens: Disorderly Women and the Fight for Public Order in Reconstruction-Era New Orleans. Professor Jacquelyn D. Hall.

Heidi Marie Soeters, *Epidemiology,* The Effect of Tuberculosis Treatment at the Time of Combination Antiretroviral Therapy (cART) Initiation on Response to cART Among HIV-Infected Individuals. Professor Annelies Van Rie.

Jessica A. Sorrentino, *Toxicology,* The Effects of Chronic and Acute Toxicological Exposures on the Expression of the Tumor Suppressor p16INK4a. Professor Norman E. Sharpless.

Erin Cathleen Steinbach, *Microbiology and Immunology,* Macrophage Phosphoinositide 3-Kinase p110δ Regulates Intestinal Homeostasis by Directing Adaptive Immunity and Enhancing Microbial Clearance. Professor Scott E. Plevy.

Wesley Langdon Storm, *Chemistry,* Combined Bactericidal/Bacterial Adhesion-Resistant Coatings Through Nitric Oxide Release. Professor Mark H. Schoenfisch.

Joseph Patrick Tighe, *Computer Science,* Towards Open-Universe Image Parsing With Broad Coverage. Professor Svetlana Lazebnik.

Michael August Tycon, *Chemistry,* The Development and Implementation of Microscopy Strategies for Investigating Protein Diffusion and Chromatin Binding. Professor Christopher J. Fecko.

Jolien Suzanne Tyler, *Biology,* The Dynamic Chromatin Landscape in Saccharomyces cerevisiae. Professor Kerry S. Bloom.

Eric Scott Ubil, *Cell and Molecular Physiology,* p53 Mediated Mesenchymal-to-Endothelial Transition is a Novel Mechanism of Vasculogenesis After Ischemic Cardiac Injury. Professor Arjun Deb.

Eugene Urrutia, *Biostatistics,* The Statistical Analysis of Genetic Sequencing and Rare Variant Association Studies. Professor Michael C. Wu.

Meagan Fluet Vaughn, *Epidemiology,* Tick-Borne Diseases in North Carolina: Seroepidemiology of Spotted Fever Group Rickettsiae and Prevention of Tick Bites Among Outdoor Workers. Professor Steven R. Meshnick.

Karthik Veeraswami Natarajan, *Business Administration,* Managing Humanitarian Operations: The Impact of Amount, Schedules and Uncertainty in Funding. Professor Jayashankar M. Swaminathan.

Mark Vitucci, *Genetics and Molecular Biology,* Molecular Characterization of Murine Models of Astrocytoma. Professor C. Ryan Miller.

Qian Wang, *Computer Science,* Registration of Brain MR Images in Large-Scale Populations. Professor Dinggang Shen.

Erica Jania Washington, *Biology,* Characterization of the Role of Pseudomonas syringae Type III Effector HopAF1 in Virulence. Professor Jeff Dangl.

Audrey Marie Wells, *Psychology,* Intracellular Mechanisms of Cocaine-Memory Reconsolidation in the Basolateral Amygdala and Dorsal Hippocampus. Professor Rita A. Fuchs Lokensgard.

Isaac Thomas Westfield, *Marine Sciences,* Mineralization of Anthropogenic CO2 Via Water-Gas-Rock Reaction. Professor Justin Ries.

Martin Charles Whittle, *Pharmacology,* Targeting the Triple-Negative Breast Cancer Kinome With Chemical Proteomics. Professor Gary L. Johnson.

James Franklin Williamson, *History,* Memory With "No Clear Answers." Volkstrauertag, Opfer des Faschismus, and the Politics of Publicly Mourning the War Dead in Germany, 1945–1972. Professor Konrad H. Jarausch.

Katie J. Wolfe, *Cell and Developmental Biology,* Chaperone Mediated Protective Protein Aggregation and Spatial Quality Control. Professor Douglas M. Cyr.

Brittany Danielle Wright, *Pharmaceutical Sciences,* Lipid Kinase Regulation of Nociceptive Signaling and Sensitization: Implications for Analgesic Drug Development. Professor Mark J. Zylka.

Jinghe Zhang, *Computer Science,* Uncertainty-Driven Adaptive Estimation With Applications in Electrical Power Systems. Professor Gregory F. Welch.

Jinsheng Zhou, *Chemistry,* Single Molecule DNA Manipulation and Analysis Using Nanofluidic Circuits. Professor John M. Ramsey.

Ruoqing Zhu, *Biostatistics,* Tree-Based Methods for Survival Analysis and High-Dimensional Data. Professor Michael R. Kosorok.

Baiming Zou, *Biostatistics,* Robust and Efficient Statistical Inference for Clustered Observational Data in Comparative Effectiveness Research. Professor Haibo Zhou.

DOCTOR OF PUBLIC HEALTH

Angeli Prakash Achrekar, *Health Policy and Management,* Saving Mothers, Giving Life: An Assessment of a Partnership for Making Progress Toward Sustainable Reductions in Global Maternal Mortality. Professor Edward L. Baker Jr.

Kerry Bruce, *Health Policy and Management,* Use of Mobile Technology for Monitoring and Evaluation in International Health and Development Programs. Professor John E. Paul.

Randi Ellen Kaufman, *Health Policy and Management,* "Bend a Little to Move It Forward." Pro-Social Rule Breaking in Public Health Practice. Professor Bruce Fried.

CANDIDATES *for* POSTBACCALAUREATE PROFESSIONAL DEGREES

December 2013

The School of Law
ESTABLISHED 1843
Dean John Charles Boger

JURIS DOCTOR
Jaha Nailah Avery
Joshua Sprigg Torell

The School of Medicine
ESTABLISHED 1879
Dean William L. Roper

DOCTOR OF MEDICINE
Suzanne Barakat
Desmina A. Hamilton
Benjamin Scott Harris
Michael Fei Huang
Alan B. Shaw

The Eshelman School of Pharmacy
ESTABLISHED 1897
Dean Robert A. Blouin

DOCTOR OF PHARMACY
Zachary Tyler Tackett

THE OLD WELL

At the heart of the campus stands the visual symbol of the University of North Carolina at Chapel Hill. For many years the Old Well served as the sole water supply for Old East and Old West dormitories. In 1897, the well was given its present decorative form at the direction of President Edwin A. Alderman, who described his beautification project as largely derived from the Temple of Love in the Garden of Versailles. In 1954, the well was given added beauty with brick walks, plantings and benches. Legend holds that students can bring good luck with a drink from the Old Well on the first day of classes.

A MESSAGE *to* CAROLINA'S NEWEST ALUMNI

Congratulations! You are now graduates of the University of North Carolina at Chapel Hill. Let your General Alumni Association help you make a seamless transition from students to alumni — no matter where you find yourselves after graduation. Visit alumni.unc.edu/youngalumni.

GETTING STARTED

Don't miss out on special invitations and services. Call (877) 377-7125 or visit alumni.unc.edu/update to keep your official University record updated. Jump start your network with Carolina alumni — join the GAA's groups on Facebook and LinkedIn.

ALUMNI CAREER SERVICES

Networking is the most effective approach to finding a job. The GAA can connect you with more than 7,000 alumni volunteers in our Alumni Advisor Network who can help you explore career options.

GAA members from the Class of 2013 have unlimited access (phone, email or in person) to the GAA's certified career coach for one year following graduation. If you're thinking about grad school, GAA members also receive discounts on Kaplan prep courses.

FINDING OTHER TAR HEELS IN YOUR AREA

- Local Carolina Clubs can be found in nearly 100 cities around the globe. Socialize, network, cheer on the Heels and continue that spirit of Tar Heel service within your community.
- The GAA's Online Alumni Directory can help you develop a network like no other. The directory includes nearly 270,000 former Carolina students.

TRUSTED INFORMATION SOURCE

The "Carolina Alumni Review," the "Out of the Blue" e-newsletter, the GAA's Twitter feed and alumni.unc.edu can keep you updated on the University's achievements and challenges as well as what's going on in Chapel Hill.

Congratulations again. We hope you'll choose to join the nearly 67,000 GAA members who remain connected and help serve Carolina and our students — past, present and future. The GAA offers new grads a one-year membership for only $25 — a $20 savings off our annual dues rate. Or save $50 on life membership — only $28.25/month for 24 months.

For more information on how the Association serves new graduates, please call Brandon Copeland '12 or Diana Koonce '02 at (800) 962-0742 or email membership@unc.edu. Visit us on the Web at alumni.unc.edu.

CANDIDATES *for* GRADUATE DEGREES *and* PROFESSIONAL GRADUATE DEGREES

December 2013

The Graduate School
ESTABLISHED 1903
Dean Steven W. Matson

MASTER OF ARTS

Chemistry
Allison Jean Hulchanski

Communication Studies
Ali Reza Eshraghi

Education
Yongmei Li
Zhongwan Wang

English
Maria Jose Obando

Exercise and Sport Science
William Wyatt Little
John Peter Manor

Geography
Jill Marie Furgurson

German Studies
Erin Marie Merritt

Linguistics
Matthew Everette Fuller
Justin David Pinta

Mass Communication
Mika Wynne Chance
Sarah Elizabeth Davidson-Palmer
Margaret A. Eason
Leticia Nigro Mazon

Political Science
Heather-Leigh Kathryn Ba
Kristin Nicole Garrett
Jacqueline Lindsay Tello
Melinda Nicole White

Psychology
Kathryn Carrie Adair
Domenic Hayden Cerri
Benjamin Reid Cox
Lee Wade Hutson
Ryan Jane Jacoby
Shawn Christopher Tracey Jones
Laura Elizabeth Kurtz
Hally O'Connor Quinn
Elise Lynn Rice

Public Policy
Ashley Beth Chaifetz
Lauren Elizabeth Lanahan
Kathleen Egan Lawlor
Daniel Pieter Smith

Religious Studies
Travis Wayne Proctor

Sociology
Daniel Auguste
Courtney Elizabeth Boen
Raquel Zanatta Coutinho
Bruce O'Brian Foster
Karen Raquel Gerken
Rosemary Angelina Russo
Kristen Marie Schorpp
Hajar Yazdiha

Technology and Communication
Hooper Alexander IV
Robert Brian Bowman
David Andrew Cagle
Darin Kate Dillehunt
Teresa Marguerite Kriegsman
Julianne Goulding Macie
Jillian Elizabeth Powell
Jeffrey Michael Shaw
Lisa Ann Stockman
Franklin Delano Taylor Jr.
Melissa Kerney Umbarger
Xiaoxin Zhu

MASTER OF CITY AND REGIONAL PLANNING
Uri Ayal Pachter
Bethany J. Windle

MASTER OF SCIENCE

Biomedical Engineering
Arthi Kannan
Lili Xu

Biostatistics
Noory Kim
Nicole Antoinette Mack

Chemistry
Trey Thomas Archer
Robert Joseph Brown

Computer Science
Ren Alexander Bauer
Richard Eric Gavaletz Jr.
Jared Scott Heinly
Yi Hong
Sujeong Kim
Sean Sanders

Economics
Laura Elizabeth Jackson
Keith McKenzie Johnson
Benjamin David Labe
Daniel F. Soques
Burcu Tasdemir
Huan Zhou

Environmental Sciences and Engineering
Tianqu Cui
Carrie Blomquist Doyle
Benjamin Thomas Foster
Yi Liu
Megan Marie Nunes

Geological Sciences
Adam Charles Curry
Zachary Fritz Miller
David Christopher Walters

Mathematics
Jacqueline Ann Stone

Occupational Therapy
Johanna Ludwig
Michelle Lynne Reed
Emily Kathryn Rexrode

Pediatric Dentistry
Maggie Wright Fetner

Physics
Joshua Thomas Fuchs
Keegan John Kelly
Jack Andrew Silano
Kyle Patrick Slinker

Speech and Hearing Sciences
Rachel B. Fann
Maureen Feldbaum

Statistics and Operations Research
Yan Jin
Amit Kumar
Zhankun Sun
Zhuzhu Zhang

The Kenan-Flagler Business School
ESTABLISHED 1919
Interim Dean John P. Evans

MASTER OF BUSINESS ADMINISTRATION
Almira Abbas
Heather T. Antonucci
Warren Steven Aronson
Telmo Alberto Arrue Mendizabal
Jacob Todd Bancino
Jefferson L. Barefoot
Aaron Lee Barr
Sangeeta Bhagwanani
Catherine W. Bing
Benjamin Roberts Blackwell
Christopher Ryan Bond
Patrick Colin Brennan

COMMENCEMENT MUSIC

The University's beloved alma mater, "Hark the Sound," evokes the feelings of loyalty and friendship that students, alumni and true blue Tar Heels everywhere have for Carolina. The orchestral marches that accompany the commencement processional are equally memorable for their power and splendor. They are truly fitting musical celebrations of the talent and achievements of UNC-Chapel Hill's visiting dignitaries, faculty and graduates.

During today's commencement ceremony, members of the academic processional will be welcomed by the fanfare brass, woodwinds and drums of Nikolai Rimsky-Korsakov's "Procession of the Nobles" and Richard Strauss' "Konigsmarsch." Rimsky-Korsakov wrote his majestic march to open the second act of the opera-ballet "Mlada," which premiered in Saint Petersburg, Russia, in 1892. Strauss premiered the flourishing "Konigsmarsch" at a palace concert in Berlin in 1907.

The new graduates will exit the ceremony while hearing familiar Carolina melodies in "Tar Heel Rhapsody," a composition written specifically for the University that features its school songs.

Candice Wooten Brown
Daniel Craig Brown
Mark Buchanan
Yvonne Marie Cerna
Alexander S. Chu
Brandon Nicholas Coffey
Grey Cook
Brian Patrick Criswell
Bhavesh Dalela
Etzer Darout
Eric Justin Dean
Joshua S. Dronen
John J. Enright
Jesse P. Erhartic
Jerimy Ryan Erickson
William Robert Everett
Christina Ann Felty
Jennifer Fink
Cristina Fitzsimmons
Allison Grace Flexer
James Dwight Freeman
Gabriela Gallegos Paz
Brett William Garcia
John Michael Genthner
Robert J. Gipp
Jesse Grant
Caroline Hope Griffith
Andrew Worth Hardison
Conor D. Hartman
David M. Hemphill
John S. Hines
Robert J. Hogan
Jon Matthew Honeycutt
Thomas B. Huddleston
Timothy Isaacs
Justin V. Ivey
Sonali Nath Jain
Shandra Montgomery Jones
Abhishek Kapoor
Kiran Sulsi Karnik
Jerilin Ellen Paith Kenney
Arjumand Jalil Khan
Robert Labori
Randall Allen Lague
Brent W. Lamm
Susan Lenderts
Jason W. Lorenz
Richard Mark Lovegrove
Leo M. Lunney
Bradley McMahon
Stephen Robert McNeill
Aaron N. McRee
Mahesh Mecheri
Anand Menon
John Michael Mineweaser Jr.
Kshitiz Mittal
Fred Bruton Monroe
Biju Nair
Charles G. Newnam
Patrick Nolan
Samuel A. Oakley
Thomas F. O'Connor
Matthew Allan O'Neal
Roman Antoni Pendzich
Narayanan Raghavan
Ali Razavi
Tyler H. Reed
Michael John Reilly
Chandan Singh Rekhi
Christopher S. Richards
Phillip Lowe Sable
Abhishek Sanghavi
Joshua S. Schachter
Patrick James Schleiger
Brian M. Segel
Amanda Kay Selah
Apurv Sharma
Sonika Singal
Daniel J. Smelser
Khalil Hasan Smith
Matthew Charles Smith
Preston Warren Smith
Angela L. Sox
Eldridge Ned Stafford III
Kevin Stansell
Timpla Stewart Casey
Samuel D. Swiderski
Pravin Y. Tambe
Robert Eric Teague
Richard E. Telleria
Todd Joseph Thayer
Bradley S. Thompson
Brandon Lee Tidwell
Robert M. Turner
Bryan A. Vining
Meredith Murray Wales
Barnabas F. York

The School of Education

ESTABLISHED 1885
Dean G. Williamson McDiarmid

MASTER OF EDUCATION
Shan Zhang

The School of Information and Library Science

ESTABLISHED 1931
Dean Gary Marchionini

MASTER OF SCIENCE IN INFORMATION SCIENCE
Kristen Dunne
James Luxton Harroun
Lauren Lavane Herman
Richard Phillip Medlin Jr.
Molly O'Dwyer
Rachel Elizabeth Trent
Chester Wells

MASTER OF SCIENCE IN LIBRARY SCIENCE
Kelly Jean Agan
Emily Alice Bowden
Jordan Bross
Erin Clary
Lindsay Claire Farinella
Lori Elizabeth Harris
Cherie Evelyn Heiberg
Emily Love Kader
Amanda Lynn Loeb
Alexandra Massey
Cale Michael McCammon
Lisa Ann McCracken
Tarienne Jaynien Mitchell
Paul Arthur Pelletier
Cristina Idalia Perez
Jonathan V. Rountree
Amber Sherman
Jody Seim Timmins
Craig Varley
Rachel Elise Wasserman
Robbin Alese Zirkle

The School of Law

ESTABLISHED 1843
Dean John Charles Boger

MASTER OF LAWS
Muatsam Elagrbi

The School of Medicine

ESTABLISHED 1879
Dean William L. Roper

MASTER OF RADIOLOGIC SCIENCE
Allen Falls Abernethy
Elizabeth Pearl Acquafredda
Holley Haynie Carroll
Alice Louise Daras
Genevieve Easley
Steven T. Henshaw
Amanda Jean Iocco

The School of Nursing

ESTABLISHED 1950
Dean Kristen M. Swanson

MASTER OF SCIENCE IN NURSING
Shannon Paige Carey
Tracey Leigh Farmer
Wendy Smith Fields
Elizabeth S. Griffin
Kristin Nicole Levoy
Tenesa Yashica McCaskill-Gainey
Ellen Dale Adams O'Neal
Kaitlin Chrobocinski Pattishall
Caitlin Jean Phillips

The Gillings School of Global Public Health

ESTABLISHED 1939
Dean Barbara K. Rimer

MASTER OF HEALTHCARE ADMINISTRATION

Karen Winslow Bentley
Anne Clement Pegram Binns
Kathryn Marie Blackmar
Kenji Christopher Brantley
Stephanie Lynn Carner
Edmund Douglas Chan
Brittany Marie Cooper
Donna Greenwood Crenshaw
Kathleen Elizabeth Danner
Linda Whittaker Darden
Spencer David Dorn
Nicole Hardin Dunn
Matthew Steven Everette
Meghan Kathleen Faulkner
Christen Brewer Franks
Dianna Elaine Gardner
Wendy Sue Getchell
William Thomas Hansley
Garrett Aubrey Hartley
Kathryn Elisabeth Hatheway
Ashley Ann Howard
Jessica Rose Johnson
Zehra Jung
Mansoor Khan
Mable Lynn King
Pamela Jo Lail
Whitney Matson
Lorna Edwina Maxwell
Marcelo Jose Miranda
Alexandra Hill O'Brien
Jasmine Elizabeth O'Connell
Alexander David Odea
Jessica Marie Olson
Vivek Parwani
Samuel Macon Rudisill
Marissa Sarv
James Edward Alston Shehi
Anna Lee Sivonda
Troy Donald Spring
Alicia Ann Stokes
Jesse T. Thomas
James Bradley Willis

MASTER OF PUBLIC HEALTH

Dolores Galaz Addison
Oluwafunmilola Bamidele Alabi
Kristina Mikhail Alnajjar
Krista Arlington Barbour
Hadi Beyhaghi
Julie Ann Boggs
Windy Ann Boyd
Lauren Ashley Brooks
Kristen L. Broom
Barbara Ann Burke
Mardel Marie Chinburg
Catherine Morgan Coughlin
Mary Claire Creech
Elizabeth Louise Davies
Anna Kathryn Dean
Anna Laura Dill
Olivia M. Dong
Colby Droubi
Chigozie Chinna Ekpe
William J. Flattery
Alison H. Frazzini
Rebecca Elaine Freeman
Kate Monroe Garand
Esther Karen Giezendanner
Carrie Leigh Hamby
Natalie Chantelle Hardy
Heidi Anne Harkins
Kari Noel Harris
Jennifer Ann Herbert
Kimberly Louise Hood
Jennifer Scoville Huff
Christine Marie Hunt
Tara Pierce Ilsley
Joan Cody Jacobs
Amal Khoury
Christopher K. Lippincott
Barbara Rochelle Listenfelt
Courtney Rose Locklear
Ella Vongai Madenyika
Zinaida Mahmutefendic
Hannah Elizabeth Martin
Kaitlin Elizabeth McCormick
Kathryn L. Melvin
Kevin Todd Miller
Anne Mittnacht
Susan Elizabeth Moist
Dawn Milette Mopkins
Katelin Hairgrove Moran
Virginia Radford Niehaus
Elyse Carmen Nieves
Chukwunonso Anthony Nwosu
Obinna Jude Okeke
Daniel A. Ozaki
Bianca Yogesh Patel
Ranjini Pillai
Nellie Placencia
Amber Rae Pulaski
Dawn Maureen Reilly
Brent Eugene Rutland
Elizabeth Ann Sanders
Laura Beth Schoenfeld
Karen M. Siemering
Jennifer Lynn Sohl
Megan M. Squires
Peter Richard Steenland
Cecilee Regina Page Steinmetz
Sarah Elizabeth Stickley
Scott Allen Welch
Yu-I Weng
Andra Wilkinson
Eric Thomas Wittbrodt
Alisha Patrice Wolf
Kathleen C. Wood
Caroline Baugh Yancey

MASTER OF SCIENCE IN CLINICAL RESEARCH

Timothy Fortescue Platts-Mills
Ralf Steffen Schmid

MASTER OF SCIENCE IN ENVIRONMENTAL ENGINEERING

John Jihoon Kim
James Burton McCann

MASTER OF SCIENCE IN PUBLIC HEALTH

Greta Alleyne Bushnell
Melissa Gayle Callaham
Lynn Suzanne Chollet Hinton
Rachel M. Davis
Meridith L. Eastman
Kathleen Missett Harper
Nigar Hasanaliyeva
Lauren Mary Hill
Briana Lee Fisler Hovermale
Roger Emron Jerry
Nathaniel S. MacHardy
Nadia Nguyen
Alice Kelton Pollard
Alyse Ellienne Polly
Bianka Monique Reese
Abigail Samara Wiener Shapiro
Jean Marie Strelitz
Laura Patricia Villa-Torres

The School of Social Work

ESTABLISHED 1920
Dean Jack M. Richman

MASTER OF SOCIAL WORK

Jane Hoffman Atmatzidis
Jeanne Kay Cross
Katelin Hairgrove Moran
Nellie Placencia
Alice Kelton Pollard
Melea April Rose-Waters
Megan M. Squires
Lauren Elisabeth Stafford
Alisha Patrice Wolf

THE BICENTENNIAL STAFF

The faculty marshal carries the bicentennial staff while leading the faculty processional on ceremonial occasions such as Commencement and University Day. The staff, commissioned for the University's 1993 bicentennial celebration by John Sanders, professor emeritus and former director of the UNC Institute of Government, and his wife, Ann Beal Sanders, was modeled by sculptor Pete Hinton. It consists of a sterling silver three-inch-high replica of the Old Well mounted on a turned and tapered oak shaft. The shaft was made from timber salvaged from the 1822 section of Old West residence hall during its 1991–1993 renovation.

CANDIDATES *for* BACCALAUREATE DEGREES

December 2013

The College of Arts and Sciences

ESTABLISHED 1795
Dean Karen M. Gil

BACHELOR OF ARTS

African and Afro-American Studies
Rujahyat Temilade Ademola
Kathryn Louise Krahenbuhl*

American Studies
Christopher Mark Breedlove
Shakita Marie Chavis-Moss
Reid Thomas Fronk
Kirstin Elizabeth Gardner*
Thomas Andrew Kleeman Melton*

Anthropology
Carey Sloane Averbook*
Isabel Helen Chasse*
Jessica Antoinette Diggs
Adrienne D. Franz*
Tyler S. Johnson
Kirstin Anna Lewis
Logan Aaron Parrish-Lopez
Divya Ravi
Robert Elliot Seck
Marie Ashley Joanne Villard*

Archaeology
Lyle Michele Bass

Art History
Hannah Morgan Clager
Amanda Carol Klinck
Abdulkarim Babatunde Mohammed

Asian Studies
Taylor Michelle Draughn
Aya Khaled El Khatib
Roxanne H. Estrada
Priyank Subhash Patel
Sara Marie Sandman

Biology
Pualani Marie Armstrong
Andrea Alexis Barreto
Jessica Antoinette Diggs
Caitlyn H. Dixon
Brian Vaughn Gallagher
Jacob Lynn Gilgen
Shakeila L. Jones
Carson Alana Kasovic
Justin Joseph May
Nettie Ellen McMiller
Tyler Jake Moser-Katz
Dara Jane Myers
Melissa Ann Price
Kelsey Elaine Rochford
Dennis Richard Self III
Natalie Paige Smith
Benjamin Albert Theye
Jordan Michael Tony
Emmanuella Turkson
Michael Alan Vincent
Dustin R. Williams
Karin Katherine Yao
Randa Zoubairi

Chemistry
Christopher Fosque Dell
Sagi Enicole Alday Gillera
Tyler S. Johnson
Shawn Appiah Kuruganti
Katherine Marie McCann
Stav Itzhak Nave
Krutika Trilok Pillai
Chelsea Ann Roof
Inhye You

Classics
Matthew Anatole Cooper*
Jesse David Hopkins

Communication Studies
Katherine Smith Arrants
Anthony Jerwade Blue
Jayestin Trevon Boston
Megan Lynn Brigman
Rebecca Juliana Brock
Chauncey Lindell Bruton
Stephen Grist Burns
Kara Rose Cannizzaro
Robin Dale Everett
Breada Anne Farrell
Christopher Gardner
Jaclyn Alexis Gaudioso-Radvany
Jordan Scott Graham
Hannah Elizabeth Heidenreich
Morgan Taylor Joyner
Jonathan Timothy Kasbe*
Amanda Carol Klinck
Aaron Thoerner Kurland*
Taylor Caroline Lacey
Lauren Ashley Livingston
Nathan Jeremy Logan
Sinead Roseanne Loughran
Daniela Madriz
Chelsea Markovich
Holly Corinne Mehaffey
Mballa Marie-Gabrielle Mendouga
Elizabeth Barkley Minton
Bianca Lynette Miramontes
Obiageli C. Nneji
Jalita-Gregelle Nelson Norwood
Sean A. Overbeeke
Aleigha Brittany Page
Douglas William Pass
Bryn Kenneth Renner
Adam Cameron Roper
Robert Adderson Scott
Josette Sophia Styles
Camille Symone Thomas
Alexander Joseph Walters

Comparative Literature
Jennifer Elizabeth Drees*

DEGREES WITH DISTINCTION

To graduate with distinction or with highest distinction, undergraduate students must have completed at least 45 academic hours at UNC–Chapel Hill and have an overall grade point average of at least 3.5 or 3.8, respectively.

UNDERGRADUATE HONORS PROGRAM

The Honors Program offers exceptionally well-qualified first-year students, sophomores and juniors an opportunity to take part of their general education curriculum in special honors seminars and honors sections. Honors seminars are special topics courses, limited in enrollment to 15 students and taught by outstanding members of the University faculty. Honors sections of regular departmental course offerings are also limited in enrollment and are taught by permanent members of the University faculty. Honors seminars and sections emphasize critical reading, class discussion and expository writing.

Senior departmental honors programs are provided for students who have demonstrated a very high level of scholastic ability and achievement and who desire to pursue an intensive, individualized program of study in their major discipline. Honors studies ordinarily consist of one or more of the following: the preparation of an honors thesis or essay, an independent research or reading program, an artistic performance or exhibition, or the completion of advanced course work in the major not normally required of students in that major. It is on the basis of participation in senior honors that a student may be graduated from the University "with Honors" or "with Highest Honors."

Kathryn Alyssa Pribble*

Computer Science
Gerardo Gonzalez
Daniel Royce Powell
Morgan Brooke Talley

Contemporary European Studies
Christina Jaye Sartori

Dramatic Art
Brittney Michelle Holland*
Paul Sunao Hovey
Jessica Lynn Leach*
Obiageli C. Nneji
Turner Hamilton Popalis
Elena Sarah Versenyi

Economics
Chad Ammenheuser
Thomas Christopher Byrd
Rocky Chen
Preston Gary Christy
Charles Preston Cranford
Caleb Daniel Dagenhart*
Alexander Warren Exum
Kirstin Elizabeth Gardner*
Mark Tyler Goodpaster
Ryan Edward Goodwin*
Matthew Brian Gromadzki
John Wesley Groves
Travis Alan Hollingsworth
Brandon Yates Howell
Jiahui Huo
SuJi Hwang*
Angela Jiang
Turner-Marie Lynn Johnson*
Dillon Michael Joyce
Travis Paul Keene
Brandon Kennedy
Samer Adel Khatib*
Cameron Jacob Gellin Klein
Andrew Thomas Krajewski
Nirav Vanraj Lakhani
Adam Que Lee
Aaron Samuel Lutkowitz*
Joseph Alexander Marley
Francisco Javier Martinez
Christopher D. Mauch
Cynetra Daniele McNeill
William Robert Parker
Darshan Kamleshkumar Patel
Nikhil Patel*
Taylor Michael Smiarowski
Hao Sun*
Luxi Tang*
Russell Carsby Thornton*
Ryan William Tyson
Mark Jeffrey Werner
Jinghao Zhou*
Zihua Zhou

English
Joshua T. Bellamy
Erin Marie Bourne
Anna Marie Breazeale
Phoebe Elaine Bulls
James Austin Cooper
Sarah Bain Dillard
Brian Carter Gaj
Chase Tyler Hanes*
Kristel Noelle Harlacher
Brittney Michelle Holland*
Kandace Renae Landers
Tyler J. Lindley
Hannah L. Long
Mia Elizabeth Nance*
Emon Melaniece Northe
SarahLewis Elizabeth Peel*
Mark Alixander Sabb
Nicole M. Stockburger*
George Summers
Borislav Viktorovich Tarasenko
Jerrika Lorraine Waller
Darius Jerome Watson

Environmental Studies
Justin Allen Miller
Jordan Michael Tony

Exercise and Sport Science
Christian Devon Bragg
Anne Lauren Brenneman*
Whitney R. Byrd
Heesoong Chae
Roberto Juventino Diaz
Daniel Lynn Galloway
Bryan Davis Gutierrez
Kaylah Erickson Hughes
James Winston Hurst
Yasmin Irizarry
Michael C. Irvin
Timothy Z. Jackson
Sarah Jarvis
Kamran Javadi
Kacee Nicole Little
James Matthew Lloyd
Hussein Aliye Mane Jr.
Christopher Scott Mitchell
Shane Michael Mularkey
Dallin Scott Page
Charles James Painter
Jabari A. Price
Lance William Randles
Meagan Elizabeth Rock
Terry Leroy Shankle
Shane Taylor*
Lauren Rogers Thorp*
Lydia E. Vargas
Alexander John Walters
Alace Rebecca Weiss
Barrett Conrad Winter
Sho Yamagishi
Cailin Anne Zygmuntowicz

Geography
Christopher Mark Breedlove
Au-Rahm Jo
Tony Monaco*

Geological Sciences
David Edward Sloan

Germanic and Slavic Languages and Literatures
Nina Lynn Broadway*
Andrew Robert Cypcar
Carson Alana Kasovic
Kirstin Anna Lewis
Kathryn Alyssa Pribble*++
Simon Andreas Scholl

Global Studies
Sonia Tara Ammu
Andrea Alexis Barreto
Holly Lauren Beilin*
Hanna Zawrzykraj Beron
Joshua David Broach
Kelly Louise Cannon*
Taylor Michelle Draughn
William Dawson Gage
Maria Ximena Godoy
Abeera Hameed
Edmundo Antonio Hernandez
SuJi Hwang*
Sarita Iyer*
Kailey Owen Izard*
Awa Loum Jagne
Shirley Cason Jenkins
Jennifer E. Kreizman
Sarah T. Mafe
Rachel Caren Moreau
Ayla Jasmine Pettry*
Robert Elliot Seck
Soobin Seong
Natalia Serediuc*
Joseph Thomas Shanahan Jr.
Tunu Wa-Dutumi
Caroline McHugh Watkins*

History
Sarah Margaret Bufkin*
Andrew Robert Cypcar
Samuel John Dunderdale
Felica Marie Felton
Nicoletta D. Garcia
Abigail Watts Henderson
Drew Alexander Hermanson
Matthew K. Humphries*
Brett Ayre Jennings
Angelina Ray Johnston
Kathleen Davis Jones*
Benjamin Francis King
Walter Allen Krause
James Matthew Lloyd
Hannah L. Long
Thomas Arthur Maloney
Haley Asbury McLoud*
Alexis Leigh Mutter
Christopher Van Ness Powe
Evan Thomas Price
Oliver Brennan Rose*
John B. Thomas Jr.*
Kasi Elizabeth Wahlers*
Caroline McHugh Watkins*
James Andreas Whitney

Interdisciplinary Studies
Sarah Margaret Bufkin*
Charles Julius Santos*

Linguistics
Rachel Estelle Broad*
Brian Lee Cansler
Elisabeth Ellis Green*
Lissa Loise Hawksley*
Rontasha Aushay Johnson
Taylor Caroline Lacey
Anna Ollinger*++

Management and Society
John Thomas Berard
William Raymond Crabtree
Clara Renee Edwards
Catherine Courtney Fuller
Mark Tyler Goodpaster
Samuel Joseph Griffin
Miles Hunter Harrell
Travis Alan Hollingsworth
Mishael Annmarie Luu
Michael Warren McGowan
Stephen M. Twilley

Mathematics
Evan McNeill Bluhm*
Adam David Butlak
Walter Kelly Davis
Julie Brianne Demuynck
Clancy William Mullan*
Graham Kesler O'Connor*
Ashlyn Diane Sanders

* *Indicates probable candidates for degrees with distinction or highest distinction based on grade point average going into the final semester.*

\+ *Indicates Honors recipients.*

++ *Indicates Highest Honors recipients.*

Luxi Tang*
Jody Lee Upright
Lydia J. Ware

Music
Adam David Butlak
Peter Timothy Daaleman

Peace, War, and Defense
Lucy Rose Bierer*
David Anderson Collins
Samuel John Dunderdale
Brooke Megan Greenwell
Nathan Leonard Harrison
Brett Ayre Jennings
Kenneth Edward Pfledderer
Oliver Brennan Rose*
Tomas Suarez*
William Matthew Willet Sr.*

Philosophy
Thomas Christopher Byrd
Deep N. Patel

Physics
Mary Christine Clements
Coran Jahrel Reed Coley
Brian Stephen Gardner
Raphael Shine Provosty

Political Science
Brian Alluisi
Hanna Zawrzykraj Beron
Robert Strange Bridgers
Joshua David Broach
Aaron M. Clayton*
David Anderson Collins
James Austin Cooper
Kyle Jackson Currie
Heather Elizabeth Dailey
Alexa Danielle DeLisle*+
Bowen Wallace Dunnan*
Michael Wayne Gagnon
Paula Andrea Gonzales
Edmundo Antonio Hernandez
Ayechinaye Itihyma Holt
Matthew K. Humphries*
Shirley Cason Jenkins
Alan Mark Karnofsky
Travis Paul Keene
Taylor Kirkland
Rahul Lakhwani*
Francisco Javier Martinez
Thomas Dean McCrorey Jr.
Patrick Williams Mealy
James Brandon Merritt
Sherri Gail Patterson
Abed-Alsalam Christopher Qadura
Omar Lovell Roque
Christina Jaye Sartori
Dennis Richard Self III
Jake Allen Sprayberry
Kasi Elizabeth Wahlers*
Katharine Rose Zolot

Psychology
Mustafa Bashir Ali
Alyssa Lynn Arena*
Katelijn S. Berckmans*
Anne Lauren Brenneman*
Tara Mariel Brossa
Sarah De La Vega
Alexa Danielle DeLisle*
Autumn Sharai Devitt
Cameron Makensey Doyle*
Terri Kay Farelli
Emma Ferriola-Bruckenstein*
Sara Margarita Gonzalez
Krystal Tyler Grady
Andrea Renae Hamersky
Ureigh Deshaun Houston
Kayla R. Jernigan
Sandy Renee Joyner
Whitney Ayres Kenerly
Mishael Annmarie Luu
Jonathan Ryan McCormick
Alexis Leigh Mutter
Pamela Paige Newcomb
Albert J. Osbahr IV
Daija Kiara Prather
Luis Fernando Reyes
Ashley Elizabeth Riddell
Morgan T. Roese
Diego Ruiz
Adwoa Birago Safo
Rosemary Cuthbert Scanga*
Jennifer Elissa Scott
Henry Mauricio Turcios Jr.
Steve Tshavntuj Yang

Public Policy
Preston Gary Christy
Jeffrey Frederick DiBerto
Marcus Allen Layer
Kareem Jamal Martin
Anne Marie Peer*
Tyler Scott Surratt
John B. Thomas Jr.*

Religious Studies
Samantha K. Beavers*
Emma Ferriola-Bruckenstein*
Suzannah MacLean Kimbrel*
Marquis Deshawn Peacock*
James William Soffa
Hannah Brooke Wyatt*

Romance Languages
Sonia Tara Ammu
Kelly Louise Cannon*
Juan Carlos Cano
Megan Marie DeLugas
Autumn Sharai Devitt
Adrienne D. Franz*
Elisabeth Ellis Green*
Jules Hill
Taylor Kirkland
Elizabeth Maciel*
Adam Lawrence Meffert*
Rachel Caren Moreau
Elizabeth Susanne Murray
Anna Ollinger*
Aleigha Brittany Page
Anne Marie Peer*
Marissa Grace Rupp
Natalia Serediuc*
Kirsten Blair Stevenson*
Elisha Kathleen Walker
Pamella Lynn White

Sociology
Jordan D. Bishopp
Charlotte Louise Bryant
Savannah Faye Copeland
Tania Viridiana De Los Santos
Tatiana E. Dobrenko
Jillian Marie Duke
David Redmond Emala
Lecount David Fantroy
Krystal Tyler Grady
William Thomas Graves
Ayechinaye Itihyma Holt
Hannah Elizabeth Jaegers
Jessica Laurel Kirby
Stephanie Alyce Madara
Donald Shavar Murry
Jessica Michelle Ownbey*
Palestine Small
Hilee Delano Taylor
Ashley Tonsberg
Candice Nicole Trnjanin
Alexander John Walters
David Ryan Winters

Studio Art
Kathy Darlene Miles Morgan*
Laura Marieka Perry
Morgan T. Roese
Nicole M. Stockburger*

Women's Studies
Rujahyat Temilade Ademola
Hannah Elizabeth Jaegers

BACHELOR OF FINE ARTS
Joseph Richard Amodei+
Jessica Graves Franklin

BACHELOR OF MUSIC
Thomas Woodward Davis*
Ashley Caroline Dean
Kieran McCarthy Fell*
Justin Ryan Griffin
Kei Kurosu*
Risden Little McElroy Jr.
Kayln Marie Thaw

BACHELOR OF SCIENCE

Applied Science
Dong Chen
Davis Clark Di Lillo
Luther Snyder Garrison
Justin Ellis Watson
Jason David Williams

Biology
Alyssa Lynn Arena*
Kateland E. Bennett
Trenton Blake Bottoms
Amanda Leigh Carringer*
Rabiah Tanzeem Choudhary
Zachary Wayne Cope
Frederick Earl Dowell*
Meghan Elizabeth Drake
Aya Khaled El Khatib
Leslie R. Esparagoza
Sagi Enicole Alday Gillera
Catherine Leigh Gold
Jiasheng Guo
Mark Stephen Harper
Kevin Bartlett Holley*
Angela Jiang
Masi Hullah Katawazai
Mehjabeen Ali Khan
Kei Kurosu*
Amina Masood Jr.
McKenzie Allen Matthews
Elizabeth Susanne Murray
Bettina Nagy
Adriana Michele Pollak*
Matthew J. Poplin*
Carlos Daniel Posada
Mary Katherine Prince
Valerie Riley
Jennifer Evelyn Schneider*
Soobin Seong
Deepti Shroff*
Steven Michael Smith
Eric Jordan Vorst
Betsy Yang*

Chemistry
Kevin Love
Maura Hiromi Masatsugu
Christopher Andreas McMillian
Clancy William Mullan*+
Hung Van Thanh Nguyen*

Ean Karl Spielvogel
William Hunter Wilkins

Computer Science
Staci Cooper*
Robert John Dallara*
Philip Michael Del Vecchio*
Roxanne H. Estrada
Syed Dannish Hasnain
Long Huynh
Brandon Mathew O'Gorman
Wu'Ang Qin
Diyang Qu
Alexey A. Vasilyev
Arie David Wolf
Christine Ning Ye*
Zhe Zhang

Environmental Sciences
Christina Bergemann
Richard McNeill Bullock
Samuel Paul Clayton-Luce
Michael Richard Everhart
Carl Philip Kolosna
Ashley Carmen Kuan
Aizhan Y. Toregozhina*
Quentin Andrew Walker
Tiffany Fong Young

Geological Sciences
Melody O. Eimer*+
Ranee Premji

Mathematical Decision Sciences
Nuoxi Chen*
Qian Liu*++
Wu'Ang Qin
Charles James Van Ostenbridge
Jinghao Zhou*

Mathematics
Juan Jose Cordova
Jacob Maas Fram
Qian Liu*
Hao Sun*

Physics
Evan McNeill Bluhm*
Kirsten Renee Hall++
Daniel Edwin Rosenberg

Psychology
Emily Ross Browning
Elaine Chow
Jeffrey Frederick DiBerto
Cynthia Ann Freimark
Mark Stephen Harper
Turner-Marie Lynn Johnson*
Allen Hobin Kang
Katherine Marie McCann
Evan Thomas Price
Otto Neil Thielen

The Kenan-Flagler Business School
ESTABLISHED 1919
Interim Dean John P. Evans

BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION
Omar Yahya Alsaidi*
Amy L. Bell*
Erin Bishop*
Rachel Lynne Brown*
Luke Armilla Campbell*
Rebecca Charalambou Charalambous
Rocky Chen
Yu Cheng*
Matthew D. Curulla*
David Vincent Di Filippo*
Roberto Juventino Diaz
Clinton Welch Greene*
Mohammed Saifuddin Hajee*
Erik Stefan Hammel
Jules Hill
Ryne Wilson Holmes
Samer Adel Khatib*
Rahul Lakhwani*
William Randolph Lehmann*
Emily Christine McGee
Jillian Nanette Noblin*
Samantha Nugent*
Jacob James Perata
Lance Michael Ravenscraft*
Diana Maria Sierra
Jung Gun Song
Noah Liebling Stang*
Barbara Miller Stephanides
Oliver Herndon Swain
Joyce Chi Kwan Tam
Ryunosuke Young Jun Samuel Uyama
Connor Joseph Van Dyke
Kaitlin N. Williams*
Yao Jessica Xiong*
Byung Sik Yun*
Yiqian Zhang

The School of Dentistry
ESTABLISHED 1949
Dean Jane A. Weintraub

BACHELOR OF SCIENCE IN DENTAL HYGIENE
Nicole G. Childress
Stephanie Cash Janums

The School of Education
ESTABLISHED 1885
Dean G. Williamson McDiarmid

BACHELOR OF ARTS IN EDUCATION
Amy Lauren Beasley
Brianna Isabel Brodie
Suzanne Elizabeth DeConto*

The School of Information and Library Science
ESTABLISHED 1931
Dean Gary Marchionini

BACHELOR OF SCIENCE IN INFORMATION SCIENCE
Sharon E. Austin
Hannah Sara Choueke IV*
John Kerry Lanzer

The School of Journalism and Mass Communication
ESTABLISHED 1924
Dean Susan Robinson King

BACHELOR OF ARTS IN BUSINESS JOURNALISM
Rachel Luke Ting Butt

BACHELOR OF ARTS IN JOURNALISM AND MASS COMMUNICATION
Carly G. Baker
Samantha K. Beavers*
Marion Johnson Brodie
Kara Rose Cannizzaro
Mary Caitlin Clark
Ryan Thomas Cocca
Kelly Ann Crupi
Janelle N. Davis*
Ari David Gross
Brittany Kay Haile
Ari D. Hires
Grace Kimberly Hurt*
Melinda Johnson
Daniela Madriz
Rachel Lyn Magerman
Vanessa Martinas
Alexandra Diane Mendoza
Zachary Michael Meyer
Kayla Nicole Moore
Andrew Murray
Evan Noll
Kiara Simone Palmer
Cecille Anne Pascual
Hayley J. Paytes
Marissa Grace Rupp
William Jeffrey Russell
Rahul Rutanen-Whaley
Emily Rose Shields
Julysa Nathalie Sosa
Deborah Jane Strange
Brian Thomas Walker*
Maria Leigh Ward
Shelley Leone Watkins
Taylore Woods

The School of Nursing
ESTABLISHED 1950
Dean Kristen M. Swanson

BACHELOR OF SCIENCE IN NURSING
Wendy Amisadai Dixon
Cynthia Ann Freimark
Melissa Coleman Hamrick
April White Mouton
Brittany Nicole Odom
Adwoa Birago Safo
Katie Michelle Zachary

The Gillings School of Global Public Health
ESTABLISHED 1939
Dean Barbara K. Rimer

BACHELOR OF SCIENCE IN PUBLIC HEALTH
Emeraghi Emerson David

Candidates Commissioned in the Armed Forces
DECEMBER 2013

UNITED STATES ARMY SECOND LIEUTENANT
Lance William Randles

* *Indicates probable candidates for degrees with distinction or highest distinction based on grade point average going into the final semester.*

\+ *Indicates Honors recipients.*

++ *Indicates Highest Honors recipients.*

CANDIDATES *for* CERTIFICATES

December 2013

Postbaccalaureate Certificates

The School of Journalism and Mass Communication

ESTABLISHED 1924
Dean Susan Robinson King

CERTIFICATE IN TECHNOLOGY AND COMMUNICATION
David Wesley Etchison
Emily Harris
Donna Slawson Hart
Jennifer Lynn McDaniel
Rachel Jones Pittman
Carolyn Lenora Schwarz
Matthew Benjamin Shaw
Kimberly Weaver Spurr
Brian Devoe Thornburg

The Gillings School of Global Public Health

ESTABLISHED 1939
Dean Barbara K. Rimer

CERTIFICATE IN CORE PUBLIC HEALTH CONCEPTS
Christy Rae Gaines
Jacob Barringer Gordon
Robert Vernon Nieland
Andrea Wallace Reed

CERTIFICATE IN FIELD EPIDEMIOLOGY
Jovan Kellene Wright

CERTIFICATE IN GLOBAL HEALTH
Stephanie Gibbs
Kim D. Rubin

GRADUATE DEGREES

August 2013 | *Graduates' names are followed by their area of major study, dissertation or project title and the name of their doctoral advisor.*

The Graduate School

ESTABLISHED 1903
Dean Steven W. Matson

DOCTOR OF PHILOSOPHY

Arnie Paul Aldridge, *Economics,* Labor Market Outcomes of Individuals in Recovery from Addiction to Alcohol. Professor Donna B. Gilleskie.

Lakulish Shailesh Antani, *Computer Science,* Interactive Sound Propagation using Precomputation and Statistical Approximations. Professor Dinesh Manocha.

Andrea Anton Gamazo, *Ecology,* Ecology and Evolution of the Lionfish Invasion of Caribbean Coral Reefs: Resistance, Adaptation and Impacts. Professor Charles H. Peterson.

Rachael Ann Baker, *Biochemistry and Biophysics,* Diverse Mechanisms of G Protein Regulation by Monoubiquitination. Professors Henrik Dohlman and Sharon Campbell.

Kevin Kumar Banda, *Political Science,* Candidate Strategy and Assessment During Election Campaigns. Professor Thomas M. Carsey.

Lydia Marie Barrigan, *Microbiology and Immunology,* Immune Evasion Strategies Utilized By Francisella Tularensis. Professor Jeffrey Frelinger.

Jonathan Tabler Bartels, *Education,* New Literacies Practices of Early Career English Teachers: From Digital Spaces to the Classroom. Professor Cheryl Mason Bolick.

Kirston Mandy Lang Barton, *Microbiology and Immunology,* Targeting the Class I HDACS to Disrupt Quiescent HIV-1 Proviruses. Professor David Margolis.

Carolina Batis Ruvalcaba, *Nutrition,* Dietary Pattern Trajectories Over Time and Diabetes Among Chinese Adults. Professor Barry Popkin.

Keesha Lashon Benson, *Social Work,* When and Where I Enter: Examining the Influence of Personal, Relational and Contextual Factors on Nonresidential African American Father Involvement. Professor Iris Carlton-LaNey.

Matthew Edward Berginski, *Biomedical Engineering,* Application of Bioimage Informatics to Quantification of Focal Adhesions and Invadopodia. Professor Shawn M. Gomez.

Anne Karen Berler, *History,* A Most Unpleasant Part of Your Duties: Military Occupation of Four Southern Cities, 1861–1865. Professor William L. Barney.

Noah Chase Berman, *Psychology,* Developmental Experiences in the Prediction of Thought Action Fusion: Contribution of Religious, Familial and Stress Factors. Professor Jonathan S. Abramowitz.

Sara Boeding, *Psychology,* Roles and Postpartum Distress: Relationship Adjustment as a Mediator. Professor Don Baucom.

Meagan Bolles, *Microbiology and Immunology,* Evaluations of Severe Acute Respiratory Syndrome Coronavirus Therapeutics and a Viral Capacity for Plasticity and Escape. Professor Ralph Baric.

Kathleen Crawford Boyle, *Romance Languages and Literatures,* From Iberian Innovation to Sardinian Appropriation: Breaking Down Giovanni Delogu Ibba's Index libri vitae. Professor Edward D. Montgomery.

Maggie Hood Bromberg, *Psychology,* An Electronic Daily Diary Study of Sleep Quality, Pain, and Emotion Regulation in Children with Juvenile Idiopathic Arthritis. Professor Karen M. Gil.

Andrew Thomas Brusoe, *Chemistry,* Enantioselective [2+2+2] Cycloadditions of Ene-Allenes and Allenes. Professor Erik J. Alexanian.

Laurel May Burk, *Physics,* Development of a Carbon Nanotube-Based Micro-CT and Its Applications in Preclinical Research. Professor Otto Z. Zhou.

Ezequiel Rodrigo Cabezon, *Economics,* Essays on Monetary Policy in Open Economies. Professor Richard Froyen.

Wendy Camelo Castillo, *Epidemiology,* Pharmacological Treatment of Gestational Diabetes and Association with Adverse Maternal and Neonatal Outcomes. Professor Michele Jonsson Funk.

Luke Campagnola, *Neurobiology,* Mapping the Functional Connectivity of the Mouse Anteroventral Cochlear Nucleus. Professor Paul Manis.

Jordan McMilan Carpenter, *Psychology,* Forewarning, Defensive Strategies, and Narrative Persuasion. Professor Melanie Green.

Angelo Castagnino, *Romance Languages and Literatures,* The Intellectual as a Detective: From Leonardo Sciascia to Roberto Saviano. Professor Federico Luisetti.

Lahnna Isabel Catalino, *Psychology,* Promoting Well-Being Through Prioritizing Positivity. Professor Barbara L. Fredrickson.

Keri Chandler, *Romance Languages and Literatures,* The Nature of Woman: Spanish Women Poets of the 18th and 19th Centuries. Professor Irene Gomez Castellano.

Shengqian Chen, *Mathematics,* Dynamics of Continuously Stratified and Two-Layer Incompressible Euler Fluids and Internal Waves. Professor Roberto Camassa.

Chia-Yi Cheng, *Biology,* The Role of Cytokinin in Female Gametophyte Development in Arabidopsis. Professor Joseph J. Kieber.

Raghav Kumar Chhetri, *Physics,* Polarization-Sensitive Optical Coherence Tomography to Study Diffusion of Plasmonic Gold Nanorods — A Novel Tool for Optical Bioimaging. Professor Amy L. Oldenburg.

Laura L. Christopherson, *Information and Library Science,* OMG! L2spell Online: The Creative Vocabulary of Cyberlanguage s(~_^)--b. Professor Stephanie W. Haas.

Joseph R. Crosswell, *Environmental Sciences and Engineering,* Air-Water CO2 Fluxes in Estuaries: Sources, Sinks and Storms. Professor Hans Paerl.

Nabarun Dasgupta, *Epidemiology,* Opioid Analgesic Prescribing and Overdose Mortality in North Carolina. Professor Steve Marshall.

Christopher Francis Dibble, *Pharmacology,* Defining the Cerebral Cavernous Malformation Protein Signaling Network in Endothelial Cells. Professor Gary L. Johnson.

Kristen Josie Dolan, *History,* Isolating Nazism: Civilian Internment in American Occupied Germany, 1944–1950. Professor Konrad H. Jarausch.

Jennifer Donnally, *History,* The Politics of Abortion and the Rise of the New Right. Professor Jacquelyn Hall.

Michael Luca Durando, *Pathology,* Novel Mechanisms Through Which Translesion Synthesis Protects Genome Integrity. Professor Cyrus Vaziri.

Eric Jay Earley, *Biology,* The Genetics of Adaptation in Drosophila Sechellia. Professor Corbin D. Jones.

Joseph Michael Falkowski, *Chemistry,* Metal-Organic Frameworks as Single-Site Asymmetric Catalysts. Professor Wenbin Lin.

Anna Farennikova, *Philosophy,* Seeing Absence. Professor William G. Lycan.

Daniel Fovargue, *Mathematics,* Multiscale and Multiphysics Computational Models of Processes in Shock Wave Lithotripsy. Professor Sorin M. Mitran.

Andrew Justin Freeman, *Psychology,* Age Effects in Manic Symptoms in Pediatric Bipolar Disorder. Professor Eric A. Youngstrom.

Ashley Caroline Freuler, *Occupational Science,* Facing Challenges on Two Fronts: Exploring the Process of Resilience for Military Families Raising a Child with Autism. Professor Grace T. Baranek.

Meridith McGee Fry, *Environmental Sciences and Engineering,* The Impacts of Short-Lived Ozone Precursors on Climate and Air Quality. Professor J. Jason West.

Yilan Fu, *Sociology,* Peer Relations: Peer Influence, Genetic Similarity Among Friends and Friendship Reciprocity. Professor Guang Guo.

Emily Beth Furgang, *Occupational Science,* Engagement of Students With Intellectual and Developmental Disabilities in Postsecondary Education. Professor Ruth Humphry.

Felicia Anne Elizabeth Gibson, *School Psychology,* An Analysis of Parenting Constructs in the National CLIO Study. Professor Barbara H. Wasik.

Paul A. Gilbert, *Health Behavior,* A Mixed-Methods Investigation of Alcohol Use Among Immigrant Sexual and Gender Minority Latinos in North Carolina. Professor Eugenia Eng.

Raphael T. Ginsberg, *Communication Studies,* Victims Deserve the Best: Victims' Rights and the Decline of the Liberal Consensus. Professor Lawrence Grossberg.

Annelies M. Goger, *Geography,* Managing Global Guilt and Local Norms: Governance in the Sri Lankan Clothing Industry. Professor John Pickles.

Shelley D. Golden, *Public Policy,* Employment Fluctuations and Tobacco: How Changing Employment Conditions Impact Smoking Behavior and Cigarette Tax Policy. Professor Krista M. Perreira.

Raul Alexander Gonzalez, *Environmental Sciences and Engineering,* Tools for Predicting Microbial Water Quality in Estuaries Used for Recreation and Shellfish Harvesting. Professor Rachel T. Noble.

Euan Drew Griffiths, *Comparative Literature,* Varieties in Translation: Adaptation and Translation Between French and English Arthurian Romance. Professor Edward D. Kennedy.

Allison K. Groves, *Health Behavior,* Prevalence and Trajectories of Intimate Partner Violence Among South African Women During Pregnancy and the Postpartum Period. Professor Suzanne Maman.

Patrick C. Guley, *Pharmaceutical Sciences,* Serum Albumin as a Carrier of Immunostimulatory Oligodeoxynucleotides for Cancer Therapy. Professor Moo J. Cho.

Fatma Bursa Gunay, *Economics,* Competition in Markets with Network Externalities. Professor Gary Biglaiser.

Michael John Hadsell, *Physics,* The Development and Characterization of a First Generation Carbon Nanotube X-Ray Based Microbeam Radiation Therapy System. Professor Otto Z. Zhou.

Courtney Sara Mathews Hadsell, *Physics,* Surface Science Studies on Titania for Solar Fuel Applications. Professor Yue Wu.

Megan Beth Harney, *Psychology,* The Influence of Fasting, Affect and Body Dissatisfaction on Set Shifting Ability. Professor Anna Bardone-Cone.

Bridgid Elizabeth Hast, *Cell and Developmental Biology,* Mechanisms Controlling the KEAP1-NRF2 Signaling Pathway in Lung Cancer. Professor Michael Benjamin Major.

Cassidy E. Henegar, *Epidemiology,* Maternal Response to Antiretroviral Therapy in Johannesburg, South Africa: Adherence and Drug Toxicities. Professor Annelies Van Rie.

Gregory Joseph Herschlag, *Mathematics,* Continuum-Atomistic Algorithms for Dendritic Formation. Professor Sorin Mitran.

Isaac Blair Hilton, *Genetics and Molecular Biology,* Small and Large-Scale Gene Regulation in Kaposi's Sarcoma-Associated Herpesvirus. Professor Dirk P. Dittmer.

Carly Kaye Hoffend, *School Psychology,* The Relationship Between the Proportion of Native American Adolescents in Schools and Socio-Emotional Functioning. Professor Barbara H. Wasik.

April Latoya Holland, *Chemistry,* Single-Channel Recording of Biological Targets Using Surface Modified Nanochannels. Professor John M. Ramsey.

Steven John Holochwost, *Psychology,* Cumulative Risk, Parenting Behaviors, and the Development of Executive Functions in Early Childhood: A Role for Physiological Self-Regulation? Professor Jean-Louis Gariepy.

Thomas Merryfield Jarrett, *Neurobiology,* Role of Rodent Vocalizations in Cocaine-Induced Maternal Neglect. Professor Josephine M. Johns.

Melissa McKeown Jenkins, *Psychology,* Cognitive De-Biasing and the Assessment of Pediatric Bipolar Disorder. Professor Eric A. Youngstrom.

Finith Ewin Jernigan, *Chemistry,* Synthesis and Development of Proteasome and Kinase Fluorescent Assays for Quantitation of Enzyme Activity. Professor David S. Lawrence.

Dari Jigjidsuren, *Social Work,* School Readiness: Does It Matter If Parents and Caregivers Think Alike? Professor Kathleen Rounds.

Jennifer Grace Job, *Education,* Their World Cracked Open: Theorizing Shelter in 9/11 Curricula. Professor Lynda Stone.

Jill E. Johnston, *Environmental Sciences and Engineering,* Assessing Exposure to Chlorinated Solvents from the Subsurface to Indoor Air Pathway. Professor Jacqueline MacDonald-Gibson.

Erin R. Kaltenbrun, *Biology,* Molecular Determinants of Tbx20 Activity During Cardiac Development. Professor Frank Conlon.

Gazi Ishak Kara, *Economics,* Essays on International Financial Regulation. Professor Anusha Chari.

David C. Kessler, *Biostatistics,* Bayesian Nonparametric Methods for High-Dimensional Data. Professor Amy Herring.

Julia Khanova, *Information and Library Science,* Role of Online Teaching Experience in Pedagogical Innovation in LIS Education: An Activity-Theoretical Analysis. Professor Gary Marchionini.

Soyoung Kim, *Biostatistics,* More Efficient Estimators for Case-Cohort Studies With Univariate and Multivariate Failure Times. Professor Jianwen Cai.

Amber Rose Knight, *Political Science,* Disabling Political Theory: Essays at the Intersection of Political Theory and Disability Studies. Professors Michael Lienesch and Susan Bickford.

Mary Elizabeth Kohn, *Linguistics,* Adolescent Ethnolinguistic Stability and Change: A Longitudinal Study. Professor Elliott Moreton.

Bo Ram Kwon, *Political Science,* The Effectiveness of Sanctions Revisited: An Empirical Analysis Using a Bargaining and Enforcement Framework. Professor Navin A. Bapat.

Kristen Elizabeth Lacefield, *English,* Mary Shelley's Novels, the Guillotine, and Contemporary Horror Film. Professor Beverly Taylor.

Wonyul Lee, *Statistics and Operations Research,* New Statistical Learning Methods for Multiple High Dimensional Datasets. Professor Yufeng Liu.

Patricia Marie Lenhart-Pendergrass, *Cell and Molecular Physiology,* Adrenomedullin and Receptor Activity Modifying Protein 3 in Women's Health. Professor Kathleen M. Caron.

Shannon M. Lewis, *School Psychology,* A Comparative Study of School-Based Interventions for Students With Emotional Disabilities, Specific Learning Disabilities and Other Health Impairments. Professor Rune J. Simeonsson.

Haohan Li, *Computer Science,* Scheduling Mixed-Criticality Real-Time Systems. Professor Sanjoy K. Baruah.

Ja-An Lin, *Biostatistics,* Statistical Methods for Imaging Genetic Data, Professors Hongtu Zhu and Joseph G. Ibrahim.

Cong Liu, *Computer Science,* Efficient Design, Analysis, and Implementation of Complex Multiprocessor Real-Time Systems. Professor James H. Anderson.

Dongyun Liu, *Pharmaceutical Sciences,* Water-in-Oil Microemulsions and Hydrogel Nanoparticles in Water-in-Oil Microemulsions for Local Intestinal Delivery of Peptides and Proteins. Professor Russell J. Mumper.

Yingchi Liu, *Physics and Astronomy,* Optical Profile and Nanostructure Effects in the Charge Carrier Transport and Performance of Photovoltaic Devices. Professor Rene Lopez.

Christina Defilippo Mack, *Epidemiology,* Improving the Validity of Nonexperimental Comparative Effectiveness Research: The Impact of Calendar Time on Prescribing of Novel Chemotherapeutic Therapies for Stage III Colon Cancer. Professor Til Stürmer.

Michael John Maher, *Romance Languages and Literatures,* Luigi Pulci and Laurentian Florence: "Contra hypocritas tantum, pater, dissi". Professor Ennio I. Rao.

Alyssa Julia Manning, *Biology,* Regulation of Epithelial Morphogenesis by the Drosophila Folded Gastrulation Signaling Pathway. Professor Stephen L. Rogers.

James D. Martindale, *Mathematics,* A Soft-Magnetic Slender Body in a Highly Viscous Fluid. Professors Roberto Camassa and Richard McLaughlin.

Leanna Rose McDonald, *Biochemistry and Biophysics,* Towards Understanding the Mechanisms of Allostery: The Investigation of the Relationship Between Dynamics, Structure, and Function in the Model Allosteric Protein CheY. Professor Andrew L. Lee.

Keith Russell Miller, *Biochemistry and Biophysics,* Use of T Cell Receptor-Like Antibody Fragments for Imaging and Immunotherapy. Professor Edward J. Collins.

Leonardo Fabio Morales Zurita, *Economics,* Obesity and Health-Related Decisions: An Empirical Model of Weight Status for Young Adults in the U.S. Professor David Guilkey.

Racha Moussa, *Economics,* Essays in Sovereign Default and International Financial Liberalization. Professor Anusha Chari.

Metello Mugnai, *Romance Languages and Literatures,* Religion Reconsidered: The Gospel according to the Italian 20th Century. Professor Federico Luisetti.

Carl Misha Najdek, *Political Science,* Creating Democratic Culture: Identity, Political Renewal and Internationalism in Walt Whitman's Political Thought. Professor Michael Lienesch.

Amanda Jane Natalizio, *Genetics and Molecular Biology,* Identification and Characterization of Drosophila Snurportin Reveals a Role for the Import Receptor Moleskin/Importin7 in snRNP Biogenesis. Professor A. Gregory Matera.

Lauren Michelle Neighbours, *Microbiology and Immunology,* The Protective and Pathologic Roles of Toll-Like Receptors in Arthritogenic Alphavirus Infection. Professor Mark T. Heise.

Michael Ryan Norris, *Chemistry,* Making Molecules for Light-Driven Water Splitting. Professors Joseph L. Templeton and Thomas J. Meyer.

Scott Christopher O'Brien, *Political Science,* Alienation, Ambivalence, and Scorekeepers: Three Essays on Public Opinion Formation in American Politics. Professor Thomas M. Carsey.

Harold Reed Ogrosky, *Mathematics,* Modeling Liquid Film Flow Inside a Vertical Tube. Professors Roberto Camassa and Greg Forest.

Kathryn Ann Ohle, *Education,* Hearing Their Voices: Examining Teacher Perceptions During the Implementation of an Instructional Policy. Professor Lynne Vernon-Feagans.

Emily Victoria Olson, *Art History,* Contextualizing Roman Honorific Monuments: Statue Groups of the Imperial Family from Olympia, Ephesus and Leptis Magna. Professor Mary C. Sturgeon.

Kennedy O. Onori, *Nursing,* Nursing Diagnoses in the Care of Hospitalized Patients with Type 2 Diabetes Mellitus: Pattern Analysis and Correlates of Health Disparities. Professor Edward J. Halloran.

Andrea Overbay, *Mathematics,* Perturbative Expansion of the Colored Jones Polynomial. Professor Lev Rozansky.

Semra Ozdemir, *Environmental Sciences and Engineering,* Measuring the Economic Value of Government Programs: An Application to Early-Childhood Interventions. Professor Dale Whittington.

Michael S. Parrott, *Journalism and Mass Communication,* An Examination of the Use of Disparagement Humor in Online TV Comedy Clips and the Role of Audience Reaction in Its Effects. Professor Rhonda Gibson.

Mehul D. Patel, *Epidemiology,* Emergency Medical Services Capacity for Prehospital Care of Stroke Patients in North Carolina. Professor Wayne D. Rosamond.

Sachin Patil, *Computer Science,* Closed-Loop Planning and Control of Steerable Medical Needles. Professor Ron Alterovitz.

Mackenzi Pergolotti, *Occupational Science,* Older Adults with Cancer: Participation in Activity and the Utilization of Occupational Therapy. Professor Malcolm Cutchin.

Eliza Jane Reader Peterson, *Biochemistry and Biophysics,* Evolution and Prevention of Antibiotic Resistance: Small Molecule Inhibitors of Bacterial Recombination Enzymes. Professor Scott F. Singleton.

Ryan Matthew Phillips, *Pharmacology,* Development of a Novel Assay of Protein Tyrosine Phosphatase Activity in Single Cells Using Capillary Electrophoresis. Professor Nancy L. Allbritton.

Laurie Marie Phillips, *Journalism and Mass Communication,* A Multi-method Examination of Race, Class, Gender, Sexual Orientation and Motivations for Participation in the YouTube-Based "It Gets Better Project." Professor Daniel Riffe.

Carmen M. Piernas Sanchez, *Nutrition,* Low Calorie- and Caloric-Sweeteners: Diet Quality, Food Intake and Purchase Patterns of U.S. Household Consumers. Professor Barry M. Popkin.

Emily Margot Pisetsky, *Psychology,* Factors Associated with Suicide Attempts in Women with Eating Disorders. Professor Cynthia M. Bulik.

Jessica Sarah Powell, *Education,* "You Don't Just Stay in One Place": The Intergenerational Pedagogy of Two African American Families in the South. Professor George Noblit.

Raju Yashaswi Prasad, *Environmental Sciences and Engineering,* Effect of the Nano-Bio Interface on the Genotoxicity of Titanium Dioxide Nanoparticles and Associated Cellular Responses. Professor Rebecca C. Fry.

Wayne A. Psek, *Health Policy and Management,* Organizational Level Factors Affecting Health Care Outcomes in VA Emergency Departments: A Configurational Approach. Professor Bryan Weiner.

Ashleigh Wells Raabe, *Art History,* Image, Space, and Social Ritual: The 'Second Style' Decorations of the House of the Cryptoporticus at Pompeii. Professor Mary C. Sturgeon.

Kristen Michelle Rappazzo, *Epidemiology,* Exposure to Particulate Matter Mass and Species During Pregnancy and Risk of Birth At Preterm Gestational Ages. Professor Julie L. Daniels.

Aaron Hugh Ratcliffe, *Business Administration,* Operating on Quality, Access, and Cost: Managing Better Health Systems. Professors Ann Marucheck and Wendell Gilland.

Allison B. Ratto, *Psychology,* The Impact of Cultural Factors on the Diagnostic Process in Autism: A Comparison of Latina and European American Mothers. Professor J. Steven Reznick.

Pamela Mullins Reaves, *Religious Studies,* Gnosis, Witness, and Early Christian Identities: The "True" Martyr in Clement of Alexandria and Gnostic Traditions. Professor Bart D. Ehrman.

Jeffrey William Richey, *History,* Playing At Nation: Soccer Institutions, Racial Ideology, and National Integration in Argentina, 1912–1931. Professor John C. Chasteen.

Erica Lynn Richman, *Social Work,* The Academic Success of College Students with Attention Deficit Hyperactivity Disorder and Learning Disabilities. Professor Sheryl Zimmerman.

Catharina Win Ringer, *Education,* Learning to Assess and Assessing to Learn: A Descriptive Study of a District-Wide Mathematics Assessment Implementation. Professor Susan N. Friel.

Reid Austin Roberts, *Microbiology and Immunology,* Harnessing What Lies Within: Programming Immunity With Biocompatible Devices to Treat Human Disease. Professors Jenny Ting and Joseph M. DeSimone.

Sheila Serr Roszell, *Nursing,* Measuring Lean Management Penetration on the Hospital Nursing Frontline: Instrument Development. Professor Mary R. Lynn.

Jeremy Alan Sabourin, *Statistics and Operations Research,* LASSO-Based Resample Model Averaging for Genetic Association Studies. Professors Andrew B. Nobel and William Valdar.

Alison P. Sanders, *Environmental Sciences and Engineering,* Environmental Metals and Birth Defects: New Approaches to Understanding the Role of Metals in Congenital Heart Defects. Professor Rebecca C. Fry.

Robert Austin Sapp, *Romance Languages and Literatures,* Family Narratives and the Transmission of Heritage in Transcultural Novels. Professor Dominique Fisher.

Julianne Denice Schmidt, *Human Movement Science,* The Influence of the Cervical Musculature, Visual Performance, and Anticipation on Head Impact Severity in High School and Collegiate Football. Professor Kevin M. Guskiewicz.

Stephanie A. Schmitt, *Public Policy,* Assessment and Rankings Efforts: The Effect on Institutional and Program-Level Change. Professor Maryann P. Feldman.

Robert Nathaniel Schuck, *Pharmaceutical Sciences,* Translational Characterization of Arachidonic Acid Metabolism in Vascular Inflammation and Cardiovascular Disease. Professor Craig R. Lee.

Virginia Senkomago, *Epidemiology,* The Role of Human Papillomavirus (HPV) Viral Load in Penile HPV Infection and Clearance Among Young Kenyan Men. Professor Jennifer S. Smith.

John Thomas Sheridan, *Cell and Molecular Physiology,* Characterizing Calcium-Activated Chloride Secretion: Implications for Sex-Linked Variations in Cystic Fibrosis. Professor Robert Tarran.

Feng Shi, *Mathematics,* Modeling Networks and Dynamics in Complex Systems: From Nano-Composites to Opinion Formation. Professors Peter J. Mucha and M. Gregory Forest.

James Sias, *Philosophy,* Emotion, Virtue and Moral Perception: A Defense of Moral Intuitions. Professor Robert M. Adams.

Meredith Nicole Sinclair, *Education,* Reading Experience: A Phenomenological Inquiry into Reading as "Not a Reader." Professor Madeleine Grumet.

Ashley Rebecca Smyth, *Marine Sciences,* Alterations in Nitrogen Cycling Resulting From Oyster Mediated Benthic-Pelagic Coupling. Professor Michael F. Piehler.

Christopher D. Sproul, *Toxicology,* Biological Responses to Ultraviolet Radiation and the Effect of Intra-S Checkpoint Inhibition on Ultraviolet Radiation-Induced Mutagenesis. Professor Marila Cordeiro-Stone.

Anne P. Starling, *Epidemiology,* Perfluoroalkyl Substances in Pregnancy and the Risk of Preeclampsia. Professor Stephanie M. Engel.

Anne Steinberg, *Romance Languages and Literatures,* Le Conte au 18e Siècle: Pour une Nouvelle Esthetique. Professor Philippe H. Barr.

Blaire Janell Steinwand, *Biology,* The Role of the FEI Receptor Kinases in the Regulation of Cell Wall Function in Arabidopsis thaliana. Professor Joseph J. Kieber.

Deonni Pamela Stolldorf, *Nursing,* The Sustainability of Innovations in Hospitals: A Look at Rapid Response Teams. Professor Cheryl B. Jones.

Natasha Tiffany Strande, *Biochemistry and Biophysics,* Characterizing Ku's Role as an AP lyase in Nonhomologous End Joining. Professor Dale A. Ramsden.

Kelly Kathryn Strutz, *Maternal and Child Health,* The Effects of Early Life Factors and Preconception Stress on Birth Weight in a National Sample of U.S. Women. Professor Jon M. Hussey.

Jonathan Adam Sugam, *Psychology,* The Role of Cellular and Chemical Signaling Within the Nucleus Accumbens in Value-Based Decision Making Behaviors. Professor Regina M. Carelli.

Heather Anne Sullivan, *Political Science,* Managing Dissent: State Capacity, Democracy, and Contentious Politics in Mexico. Professors Evelyne Huber and Graeme Robertson.

Jennifer Supp-Montgomerie, *Religious Studies,* Making a World for America: Electric Communication, Expansive Protestantism, and Globalization in the 19th Century. Professor Randall Styers.

Amy Elizabeth Swain, *Education,* Do We Want the Canary to Sing? Thinking Alternatively About Alternative Education. Professor George W. Noblit.

Carolyn Samuel Taylor, *Business Administration,* Three Essays on Advertising, Customer Satisfaction and Customer Loyalty. Professor Katrijn Gielens.

ACADEMIC DRESS

The following information, based in part on An Academic Costume Code and Ceremony Guide (published by the American Council on Education), may be helpful in identifying academic attire worn during UNC's Commencement exercises.

DEGREE CANDIDATES' REGALIA. The University's bachelor's gown is both Carolina blue and truly green, as in sustainably made. The fabric is made from 100 percent post-consumer recycled plastic bottles (23 bottles for each gown) and is manufactured at mills in the Carolinas. The information about the gown's sustainability is suitably printed directly on the cloth, without the use of an extra label. In addition to being dyed a custom Carolina blue color, the gowns also have a streamlined fit, white piping along the yoke and two white panels in front. The tassels are blue and white, topped with a silver-colored Old Well medallion. An optional accessory is an embroidered white stole that the graduate may give to a parent in gratitude after the Commencement ceremony.

The untrimmed, black master's gown has a hood and an oblong sleeve, open at the wrist, that hangs nearly to the ground; the back part of its oblong shape is square cut and the arc in the front is cut away. The hooded doctoral gown features three bars across each sleeve. The doctoral gown for Carolina graduates is Carolina blue, with facings and crossbars of dark blue outlined in white piping. The facings bear the shield of the University supported by the torches of learning.

The hoods of master's and doctoral degree candidates vary in color according to the field of study (see list below).

FACULTY REGALIA. Faculty wear the regalia of the institution that conferred their highest degree. The doctoral gowns are usually faced with black velvet, although the color of the velvet may vary according to the field of study. Hoods, which differ in length according to the level of the degree held, are lined with official colors of the university or college that conferred the degree, usually with one color forming a chevron pattern over the other. Some colors you will see on faculty and administrators' robes are, for example, the crimson of Harvard, the maroon of Chicago, the orange and black of Princeton, the dark blue of Yale, and the light blue and white of North Carolina.

Like the hoods of master's and doctoral degree candidates, faculty hoods are edged and bound with velvet in the color appropriate to the field of study. The colors in the hoods and gowns of faculty and administrators represent the following fields in which degrees were taken:

APRICOT: Nursing
BROWN: Fine Arts
CITRON: Social Work
CRIMSON: Journalism
DARK BLUE: Philosophy
GOLDEN YELLOW: Science
GREEN: Medicine
LEMON YELLOW: Library Science
LIGHT BLUE: Education
LILAC: Dentistry
OLIVE GREEN: Pharmacy
ORANGE: Engineering
PEACOCK BLUE: Public Administration
PINK: Music
PURPLE: Law
SAGE GREEN: Physical Education
SALMON PINK: Public Health
SCARLET: Theology
YELLOW BROWN: Commerce, Business, Accountancy
WHITE: Arts, Letters, Humanities

Kristina S. Ten Haagen, *School Psychology,* Relationship Among Housing Quality, Food Insecurity, Social Service Needs, Domestic Violence, and Mental Health Needs of Children and Families. Professor Rune J. Simeonsson.

Khadija R. Turay, *Maternal and Child Health,* Body Mass Index and Self-Perceived Weight: Are They Associated With Sexual and Relationship Health? Professor Carolyn T. Halpern.

Jillian Tyrrell, *Chemistry,* Effect of Macromolecular Crowding on the Structure and Function of a Riboswitch Aptamer in Cells and In Vitro. Professor Gary J. Pielak.

Rycel Lim Uy, *Chemistry,* Structure-Property Optimizations of Semiconducting Polymers for Organic Solar Cells. Professor Wei You.

Tanya Vacharkulksemsuk, *Psychology,* Stepping Toward Collective Mindsets: An Investigation of Group- and Leader-Based Synchrony in Work Teams. Professor Barbara L. Fredrickson.

Anna Robinson Van Meter, *Psychology,* Does a Sensitive Palate Beget Sensitive Mood? The Relation Between Supertasting and Disordered Mood. Professor Eric A. Youngstrom.

Javier Velasco-Martin, *Information and Library Science,* Exploring Self-Disclosure in Online Social Networks. Professor Gary Marchionini.

Sherry Antoinette Venere, *Romance Languages and Literatures,* Armas y Letras: Santillana and the Forging of a New Chivalric Ideal. Professor Frank Dominguez.

Brandon Grant Wagner, *Sociology,* Correlates and Contexts of Sexual Infidelity in American Adults. Professor Kathleen Harris.

Pitchpatu Waiyachote, *Journalism and Mass Communication,* A Comparison of Interactions on Facebook Brand Pages Between Global Brands and Publics in Individualistic and Collectivistic Countries. Professor Lois A. Boynton.

Cheng Wang, *Chemistry,* Framework Materials for Solar Energy Utilization. Professor Wenbin Lin.

Tiffany Renee Washington, *Social Work,* Older Adult Kidney Disease Self-Management Behaviors and Their Relationship to Depression, Self-Efficacy, Illness Perceptions and Social Support. Professor Sheryl Zimmerman.

Lei Wei, *Computer Science,* Privacy-Preserving Regular Expression Evaluation on Encrypted Data. Professor Michael Reiter.

Charles Hamilton Weir, *Environmental Sciences and Engineering,* Ambient Air Pollution, Allergic Sensitization, Respiratory Outcomes and Symptoms: Findings from the 2005–2006 National Health and Nutrition Examination Survey. Professor William Vizuete.

Brantley Andrew West, *Physics,* Uncovering Molecular Relaxation Processes with Nonlinear Spectroscopies in the Deep UV. Professors Laurie E. McNeil and Andrew M. Moran.

Michael G. Wheaton, *Psychology,* Information Processing and Affective Responses in Hoarding Disorder. Professor Jonathan S. Abramowitz.

Ahmed Whitt, *Social Work,* Impact of the Built Environment on Urban Adolescent Depressive Symptoms. Professor Matthew O. Howard.

Joseph L. Wiltberger, *Anthropology,* Sueños Salvadoreños: Struggles to Build Other Futures in El Salvador's Migration Landscape. Professor Arturo Escobar.

William Kindred Winecoff, *Political Science,* A Complex Political Economy of the Global Banking System. Professor Thomas Oatley.

Katie Jean Wolfe, *Cell and Developmental Biology,* Chaperone Mediated Protective Protein Aggregation and Spatial Quality Control. Professor Douglas M. Cyr.

Jianfeng Yao, *Economics,* Maternal Employment Type, Maternal Care and Child Health in Rural China: Policy and Behavior. Professor John Akin.

Yong Zhang, *Pharmaceutical Sciences,* Transdermal Delivery of a DTPA Penta-ethyl Ester Prodrug for Continuous Decorporation of Transuranic Elements. Professor Michael Jay.

Hang Zhang, *Linguistics,* The Second Language Acquisition of Mandarin Chinese Tones by English, Japanese and Korean Speakers. Professor Jennifer L. Smith.

Yang Zhou, *Microbiology and Immunology,* Mechanisms of Antibody Mediated Neutralization of Dengue Virus. Professor Aravinda M. de Silva.

Kris A. Zorigian, *Education,* The Intersection Between Self-Determination and Motivation of Students With Disabilities: From Student and Teacher Perspectives. Professor Melissa Miller.

Niha Zubair, *Nutrition,* Novel Approach to Examine the Interactive Role of Dietary, Lifestyle, and Genetic Factors on Cardiometabolic Risk. Professor Linda S. Adair.

DOCTOR OF PUBLIC HEALTH

Timothy David Neil King, *Health Policy and Management,* Pharmaceutical Research and Development: A Key Informant Assessment of Whether an "Open-Science" Model Could Improve Clinical Research in Terms of Quality and Efficiency. Professor John E. Paul.

Gregory M. Mayhew, *Biostatistics,* Genotype-Phenotype Similarity Testing and Methods for Integrating Multiple Data Sources in Genetic Association. Professors Fred A. Wright and Fei Zou.

Guochen Song, *Biostatistics,* Enrollment and Stopping Rules for Managing Toxicity in Phase II Oncology Trials With Delayed Outcome. Professor Anastasia Ivanova.

Yi Zhang, *Biostatistics,* Statistical Methods for Evaluating the Diagnostic Accuracy of Incomplete Multiple Tests. Professors Donglin Zeng and Haitao Chu.

POSTBACCALAUREATE PROFESSIONAL DEGREES, GRADUATE DEGREES *and* PROFESSIONAL GRADUATE DEGREES

August 2013

The School of Dentistry

ESTABLISHED 1949

Dean Jane A. Weintraub

DOCTOR OF DENTAL SURGERY

Min Shin

The School of Law

ESTABLISHED 1843

Dean John Charles Boger

JURIS DOCTOR

Jane Hoffman Atmatzidis

The Eshelman School of Pharmacy

ESTABLISHED 1897

Dean Robert A. Blouin

DOCTOR OF PHARMACY

Eric Osei Addo
Tiffany McIntosh Dunnon

The Graduate School

ESTABLISHED 1903

Dean Steven W. Matson

MASTER OF ARTS

Classics
Angelina Danielle Phebus

Education
Eric Alan Common
Kelle Diane Falls
Jessie Taylor Hargrave
Young Ran Kim
Katharine Haywood Robinson
Esmeralda Rodriguez
Nathan Trappe

Exercise and Sport Science
Jacob Matthew Allen
Dustin Buttars
Brian Day
Christopher Lee Gibson
Rachel M. Graff
Simon Joseph Haake
Rong Hua
Reid Elizabeth Jones
Gilbert Edward King
Samantha Lillian Kirby
Alice Frances Pierce
Laniesa Cherie Shafer
Dangaia Alfre Simone Sims
Molly Rebecca Smith
Ernest Landon Washington
Mary Nina Woessner

Folklore
Cristin Elizabeth Accardi
Elizabeth Ashley Thompson

History
Cheryl Xue Dong
Daphne Fruchtman
Jeanine Navarrete
Elizabeth Drew Sawyer

Linguistics
Lucia Lopes Fischer
Katherine Elaine Shaw

Mass Communication
Laura Heisner Marshall
John Russell Remensperger
Kathryn Shumake

Musicology
David Vanderhamm
Oren Vinogradov

Political Science
Walter Edward Brownlow
Christopher Martin Caver
Claire Elizabeth Greenstein
Joshua M. Jansa
Bryce Loidolt
Lindsay Reid
Drew Alan Sampson
Casey Edward Stegman
Christian Gerritt Watt

Psychology
Benjamin Edwards Buck
Kristin Michelle Healey
Brooke Erin Magnus

Romance Languages and Literatures
Emily Rose Loch
Ruben Adrian Rosales

Russian and East European Studies
Regina Nachreiner Kutle
Rebecca Frances Ruck

School Psychology
Genna R. Durante

MASTER OF CITY AND REGIONAL PLANNING

Katherine Painter Dydak
Eryn Rosenblum

MASTER OF SCIENCE

Biostatistics
Katelyn Ruth Garcia
Jessie Jiarong Wang

Management
Honey Jhala

Computer Science
Hal Winchester Canary
Wenyu Lu
Alfredo Esteban Miranda
Hengchin Yeh

Dental Hygiene Education
Antiana Deshawn Perry

Environmental Sciences and Engineering
Ryan D. Cronk
Katherine Hope Harrold

Geological Sciences
Jesse Stuart Hill
Jennifer Mason Johnson
Roger Lowell Putnam III

Marine Sciences
Emily Gray

Nutrition
Sai Lao

Occupational Therapy
Katherine Lyn Cox
Manisha Dass
Lauren Elizabeth Demoss
Megan Elizabeth Garrett
Courtney Ann Graham
Margaret Ferrell Hyneman Proctor
Eunhwa Jung
Brian Eugene Lattner
Amanda L. Lert
Carrie Catherine Michael
Lillian Joyce Parrish
Michele Erin Redderson
Willis Todd Robertson
Jenny Louise Thompson
Lauren Michelle Williams
Lauren Ashley Williford

Operative Dentistry
Kristi Ellen Erickson

Physics
Kyle Joseph Snavely

Rehabilitation Counseling and Psychology
Lauren Renee Bangert

Speech and Hearing Sciences
Jennifer Lynn Fuchs

Statistics and Operations Research
Bryan Taekyung Jung
Jianping Liu
Wissuta Prasertpol
Jeremy Sabourin
Han Ye

The Kenan-Flagler Business School
ESTABLISHED 1919
Interim Dean John P. Evans

MASTER OF BUSINESS ADMINISTRATION
Allen W. Baker
Marc Andrew Calabrese
Jill Elizabeth Clancy
Jamie E. DeMaria
Ana-Laura Diaz
Jonathan Matthew Doorley
Paul M. Douglas
Brian T. Edwards
Alexander Escobar
Kristen B. Fanarakis
Javier Ferraez Corres
David Fineberg
Andres Eduardo Galindo
Julie M. Goodliffe
Ryan Marc Greenway
Daniel M. Hager
Shawn M. Hoyer
Jason Ronald Jenny
Kamira T. Jones
Tracey Lyn Keiter
Joseph Naylor Kenan
Scott Matthew King
Kristine A. Kurtzeborn
Elizabeth A. Larson
Michael A. MacIntyre
Ranjeet Ravindra Mankikar
Christopher Mannix
Adam Garland Mayfield
Fiona F. McFarland
Brian L. McGrath
Marc Medeiros
Latonya Danelle Montford
Kristan King Nevins
James Dertad Omartian
Michael P. Orazi
Dandre K. Payne
Carlo Pedrazzini
Martin Penagos
Phillip Wayne Poliquin
Russell M. Pool
Arivanandam Rajaraman
Raghu Ramaiah
Manohar Reddy Sama
David Erik Sneed
Scott Suttmeier
Alfred Tang
Sonali Bose Thier
James Phillips Thomas Jr.
Jose Angel Touzon Aguilera
Rosa Elleni Vargas Brito

The School of Education
ESTABLISHED 1885
Dean G. Williamson McDiarmid

MASTER OF ARTS IN TEACHING
Lena Anne Abed
Anna Christian Allen
Ashley Laren Andersen
Wendy Gonzalez Bateman
Maxine Elise Bier
James Stedman Bryan
Emily Elizabeth Burns
Kay Cee Butcher
Sarah Tillett Cade
Jordan Rana Carter
Christina Marie Clark
Andrew Ronald Coffey
Philip Henry Cook
Amanda Katherine Devetski
Katherine Elizabeth Dow
Monique Yvette Gareau
Ciaran Rea Harris
Audrey Karina Hartye
Justin Dale Hawn
Ashley Michelle Honaker
Andrew James Jester
David Carlisle Kayler
Elizabeth Seton Mazzocchi
Daniela Maria Osegueda
Jessica Danielle Pierce
Megan Lee Pierce
Michael Thomas Rhodes
Sara Sullivan Riley
Tatum Lynette Rimmer
Holly Shea Roberts
Liana Marie Roux
Jeremy Alan Sanders
Joel Anthony Smith
Cameron Arthur Sykes
Sally Ann Wheeler
Jessica Smith Yates
Skylar B. Zee

MASTER OF EDUCATION
Stephanie Barnett
Sarah Marie Black
Tiffany Richardson Brown
William Averett Brown
David Morris Buff
Camila Oliveira Dossantos
Kevin Raymond Duquette
Allison Anne Frosch
Barbie Garayua-Tudryn
Christopher Daniel Gibson
Chancie Louise Housholder
Elizabeth McKinley Kane
Maureen Lynn Shields Kurz
Bisset Ginmyung Lee
Casey Malarney
Kathryn Mauck
Makeda Alycia Miller
Mary Wallace Monroe
Ciera Raquel Nicholson
Sara Jeanne Predieri
Lindsay Nicole Ross
Chonthicha Eve Vongchucherd
Laura E. Walton
Carl Yiu
Xiaoying Zhan
Christine Renee Zimmerman

The School of Information and Library Science
ESTABLISHED 1931
Dean Gary Marchionini

MASTER OF SCIENCE IN INFORMATION SCIENCE
Nathalie Baudrand
Robert Lee Cooper
Ying Han
Pan Hu
Sherief Ahmed Khaki
Sara Mannheimer
Chelcie Juliet Rowell

MASTER OF SCIENCE IN LIBRARY SCIENCE
Trudi J. Abel
Allison Elisabeth Buehler
Maria Eugenia Chastain
Meghan Eileen Croll
Allison Dixon
Anona Catherine Earls
Susan Lynn Ivey
Jennifer Elizabeth Polidoro
Daniel Coley Sumerlin
Alexandra Simms Toomey
Jaycie Nicole Vos
Janeen Elyse Williams
Jessica Lee Wood

The School of Medicine
ESTABLISHED 1879
Dean William L. Roper

DOCTOR OF PHYSICAL THERAPY
Christina Marie Aluri
Nicholas Camilleri
Natalie Lawler Chapin
Megan L. Christiansen
Kimberly Dale
Donna Dean
Megan Jo Eyler
Betsy Anna Frederick
Alexandra Smith Gormley
Brandon Michael Hall
Erin Toomey Hopper
Kyle E. Hoppes
Elisabeth P. Kensrue
Carly C. Laper
Joanne Grace Larowe
Angela Diane Lauten
Brandon Dayley Lindquist
Matthew G. Medlin
Lauren Michelle Lemmons O'Neill
Kendall Nicole Schlossberg
Cassandra Lee Short
Lauren Bailey Suggs
Britt Alexandria Tatum
Jennifer A. Tooher
Elizabeth Carlton Waddell
Sarah Ann Yancey

The School of Nursing
ESTABLISHED 1950
Dean Kristen M. Swanson

MASTER OF SCIENCE IN NURSING
Karla M. Abela
Sarah Kyunga An
Kimberly R. Cash
Danielle Angel Deoliveira
Tajuane Horton Dockery
Barbara Walsh Eron
Mary Trimigan Holmes
Terry York Law Jr.

The Gillings School of Global Public Health

ESTABLISHED 1939

Dean Barbara K. Rimer

MASTER OF HEALTHCARE ADMINISTRATION

Jitesh Jagdish Chawla

MASTER OF PUBLIC HEALTH

Samantha Alice Michelle Aaron
Elena Marie Adamo
Nesochi Nonyelum Adimorah
Nazir Haroon Ahmad
Tania Arthur
Uzma Atif
Kiri Wiggins Bagley
Vaishnavi Bhaskar
Natalie McCarter Bowman
Kelly Bragg
Gary Francis Burke
Timica Donyeal Campbell
Jamie Lynn Carter
Claudia I. Castillo
Jie Chen
Russell James Coletti
Caroline Elizabeth Gass
Eric S. Golike
Joseph Robert Grubbs Jr.
Ann Wright Hallyburton
Robert Preston Hutchins
N'Djamina A. Johnson
Renee Cynthia Johnson
Eric Stephen Kiechle
Ja Yeon Kim
Sarah N. Kim
Cameron Trevor Locklear
Sophia Naz Malik
Daniel Taylor McMillan
Brian E. Moore
Virginia A. Moye
Jennifer Lynn Neumann
Ifeoma Ndidi Onwubiko
Amy Alderman Poe
Pradeep J. Poonnen
Zeinab Saleh
Claire Jean Thomson
Kari G. Tomlinson
Johannah Torkelson
Jacob Wang
Nancy Nan Wang
Daniel Joseph Watford
Elisa Wershba
Daniel Bennett Whitesides
Cameron Robert Wolfe
Heidi Pauline Worley
Wei Xue
Hannah Yin

MASTER OF SCIENCE IN CLINICAL RESEARCH

Dolly Chanta'E Penn
Katherine E. Reeder-Hayes

MASTER OF SCIENCE IN ENVIRONMENTAL SCIENCES AND ENGINEERING

Jessica Montanez

MASTER OF SCIENCE IN PUBLIC HEALTH

Gina E. Brown
Jennifer Casanova
Smrithi Dinesh Divakaran
Autumn Danylle Locklear
Raha Njoki Manyara

The School of Social Work

ESTABLISHED 1920

Dean Jack M. Richman

MASTER OF SOCIAL WORK

Allison Banning Mangin
Anna Byrd Parisi
Aqiyla Melissa Thomas
Katherine Barrette Welch
Jie Yang

BACCALAUREATE DEGREES

August 2013

The College of Arts and Sciences

ESTABLISHED 1795
Dean Karen M. Gil

BACHELOR OF ARTS

African and Afro-American Studies
Melvin Charles Aikens Jr.
Shawn Alexander Boykin
Jasmin Chantel Howard
Lauren Elizabeth Kennedy
Amanda Milagros Rodriguez

Anthropology
Shawn Alexander Boykin
Chris Michael Broadley
Desiree Pamela Ferrell
Sarah Elizabeth Flores*
Ayat Gamal Ali Hamza
Iesha Doretha Lenora Joyner
Anna Wrenn Morton*
Allison Renee Oliphant
Karmen Leigh Strickland

Archaeology
Paige Alyse Ford
Lindsay Rene Shirkey*

Asian Studies
Marteka Deva Fair
Brian Kristopher Ladd*+
Umber Siddiqui
Pang Tao Yang

Biology
Alice Lynn Athey
Ashley Andrews Barham
Mayrim Bernard-Vega
Elizabeth Ann Cronin
Megan Alane Gyoerkoe
Erin Dorothea Holdaway
Laura Kaodichi Ibeto
Heather Simone Kizer
William Matthew Lathery
Tiffany Yunha Lee
Karley Ann Murphy
Tonmoy Sabur Nasiri
Precious Eberechukwu Ogbuefi
Ankita D. Patel
Kishan Mahesh Patel
Monika Shailesh Patel
Melissa Mary Porco
Umber Siddiqui
Melina Perroni Silva
Veronica Mary Stark
Karmen Leigh Strickland
Elizabeth Joy Vanlue
Morgan Elizabeth Winslow

Chemistry
Robin Feito*
Robert Carroll Gollmar
Yuri Dmitri Hroblak
Gabriele Eugenia Seider
Samuel Forrest Williams

Communication Studies
Melvin Charles Aikens Jr.
Jared Parker Dalton Ange
Kristen Marie Baranowski
Emily Caroline Bohbrink
Kira Louise Borman
Amber Jean Brooks**
Stephan Bruscino
Kristen Mary Chavez*
John Morgan Bert Cockerham
Ashley Brianne Cox*
John David Ernstes
Christopher Jeffery Feagles
Douglas A. Ferguson
Austin Cade Fisher
Hannah Irene Floyd**
Tamara Gavric*
Graham Mark Gerald
Rocco Louis Giamatteo III**
Eric Kwame Hall
Gregory Hansbrough
Ethan Christopher Henderson
James Hayden Hunter
Chloe Noelle Kizer
Howard Kelly Landis IV
Junette Y. Lee
Benjamin Andrew Long
Kelsey Marie Mays*
James Charles McLeod*
Luke Volpe Mojica
Brandon Payne Moree
Brett Nagle
Daniel Brattain Paustian
Madeline Blair Pendergraft**
Erik Josef Peterson
Samuel Leigh Peterson*++
Timothy David Proctor
Kyle Lamont Rainey
Stacey Kathleen Robison
William Pollitt Rowe
Myca Ashley San Miguel
Lyndsay Marie Schultz
Dawn Christine Sesta*
Cayla Brooke Shortley
Rex Allen Stewart Jr.*
Sean Patrick Taylor
Chrishawn Debrina Williams
Kallie Wray
Yeina Yi*

Computer Science
Mohsin Mazhar Ali+
Albert Thomas Ferguson

Contemporary European Studies
James Griffith McLeod

Dramatic Art
Candace Rena Crawford
Ryan Michael Goer
Jo Saberniak
Banshion Lazarus Simmons

Economics
Paige Noelle Andrews+
Benjamin A. Badgley
Brice William Barnett
Katherine Elizabeth Burton*
Zachary Scott Clayton
Kurt Jacob Deutinger
Ehimere Tokoni Etomi
Amber Lydia Evans
Jacob Francis Filip
Morgan Leigh Hicks
Elissa Faith Hill
Ann Habersham Johnston**
Yannan Kang
Jameer Ondre Logan
Smith Alexander Marks
Sabrina Renee Negron
Patrick Lowell Nolan
Sean Daniel Olson
Kishan Mahesh Patel
Pavan Divyang Patel
Te Qi
Alec Harris Rubenstein*
Christopher Jacob Serody
Haoyu Song
Travis Aaron Spencer
Carlos Arturo Vaca
Zachary Aaron Weiner
Lucas Addison Winters
Michael Yim

English
Claudia Yanet Alonso
Jonathon Andre Beckles
Stephanie Leigh Blackmon
Patrick Eugene Brown
Stephan Bruscino
Ashlea Marie Carver
Samantha Scully Deal
Noah Francis Dehmer
Sarah Daniele Dickerson
Anna Grace Fairley
Nina Morgan Frank
Kendall Alexandra Graham*
Michelle Elizabeth Hardin
Dewitt Jones II
Wallis Faith McElroy
Maryanne Elizabeth Rackl*
Rachel Erin Shope*
Kimberly Mason Smith
Madison Averi Swofford**
Michela Jean Wagner*
Bennett Gray Williams

Environmental Studies
Evelyn Laura Harris
Julio Marcelino Parede Jr.
Juliette Helene Rousseau
Ernest David Sumner II

Exercise and Sport Science
Curtis Anthony Campbell
Antonio Victor Castillo
Ashley Annette Contreras
Haleigh Mariah Dickey
Michael Jemar Dyson
Jasmine Hall El
Emily M. Garrity
Travis Eugene Gavalis
David Kyle Goldsmith
Casey Ann Grice
Glorie Anne Gutierrez Soto
Michael W. Hefron
Nicholas Darnell Heggie
Heather Suzanne Henry
Daniel Ward Heyward
Marcus Phillip Howard
Emily Ellyn Hudson
Nicholas Ramon Johnson
Zoya Y. Johnson
Kathryn Marie Knapp
Kendall Mugo Lancaster
Brock Anthony Livorio
Thomas James Luchsinger
Holli Marie McClendon
Kyle Porter McDermott*
Patrick Lamar McPhail
Jennifer Anne Ortiz
Joseph Baxter Overman
Clayton Elias Parros
Reynaldo Alejandro Radlin
Matthew Allen Ridenhour
Trevor Allen Scott
Max Rifkin Sterling
Gina Maria Suarez-Malaguti
Eliott Ricardo Torres
Nicol Rossano Williams Jr.

Geological Sciences
Demarcus Shontae' Artis
Ashley Andrews Barham

Geography
Lauren Elizabeth Biles
Douglas A. Ferguson
Zachary Ramsey Frere*
Cameron LeCarter Horne
Jordan Paul McClead
Stephen Jackson Morgan*
Marshall David Price
Ernest David Sumner II
Jake Austin Vincent

Germanic and Slavic Languages and Literatures
James Nicholas Brennan
Martin Christoph Eiler
Erik Josef Peterson
Laura Storey Pianowski

Global Studies
Erin Elizabeth Burks
Rachel Mae Dickinson*
Jaclyn Marie Diederich
Desiree Pamela Ferrell
Monique J. Gainey
Cathryn Elizabeth Hoffmann
Erienne Dixon Jenkins
Robin Mathew Joseph
Nihad M. Mansour*
Tannyce Shannelle Parris
Jason Ralph Perfetto
Jordan Edward Powell
Michelle Erin Pujals*
Lisa Christine Spaeth
Ruksona Kamil Usmanova

History
Faranak Shahsavar Amiri
Benjamin A. Badgley
James Nicholas Brennan
Justin Michael Combs
Jaron David Fleming
Michael Rodgers Folk
Alexander Lloyd Freeman
Kendall Alexandra Graham*
Cliff Vincent Hall
Cora L. Harms
Samuel Francis Hobbs+
William Scott Jacobsen
Chloe Noelle Kizer
Fred Wilson Lowry III
Ryan Chase Reynolds Macaione
Fred Derek Matt
Jordan Paul McClead
John Spratt McColl Jr.
Eric Cameron Melton
Meredith Margaret Nichter*
Ross Williams Pope
Zina Marie Scott-Payne
Sean Michael Sullivan
Percia Leelonda Swift
Karen Tatiana Villeda

Interdisciplinary Studies
Emily Erin O'Mara*

Linguistics
Zachary Cannon Allen
Michael I. Chen
Abigail Tuazon Gonzales
Elizabeth Anna Rider Wilson

UNIVERSITY COLORS

As symbols of unity among Carolina students, alumni and fans, the school colors of light blue and white were first used around 1800 to distinguish between members of the Dialectic and Philanthropic Literary Societies. Throughout the 19th century, students were required to be members of either the Di or the Phi. The Di's color was light blue, and the Phi's was white. At University commencements, balls and other social events, the student officials, managers and marshals wore the color of their society, blue or white. Because the chief marshal or chief ball manager represented the whole student body, not just his society, he wore both colors. When the University fielded its first intercollegiate athletic teams in 1888, the question of what colors to wear had already been answered. Light blue and white had come to symbolize membership in the University, not in a single society.

Management and Society
Justin David Baugh
John William Gillespie
Joshua Charles James
Thomas Spencer Mann
Sabrina Renee Negron
Gracen Ervin Pittard
Steven Russell Rastivo
William Alexander Scroggs
Daniel Salim Tannous
Thomas Cornay Wood

Mathematics
Paige Noelle Andrews
Daniel Steven Fox
Dylan James Greenleaf*
Patrick Robert McCarthy
Patrick Lowell Nolan
Te Qi
Alissandra Nicole Rodriguez
Xiangying Wu*

Music
Joseph Michael Partin

Peace War and Defense
Alena Paige Callahan
David Lawrence Drandorff
William Scott Jacobsen
Robin Mathew Joseph
Jordan Colby Lovin
Kyle Porter McDermott*
Eric Andrew Murbach*
Karen Tatiana Villeda

Philosophy
Jacob Francis Filip
Christopher J. Serody
Joanna Ruth Steele

Physics
Jo Saberniak

Political Science
Talia Zaina Alsous*
Andrew Owen Beatty
Latashia Bethea
James Carlin Braid
Carlos S. Cano
Curtis Fennell Carr
Katherine Lewis Carson
David Michael Coffey
Therren Jermaine Dunham
Courtney Katherine Hasty
Morgan Leigh Hicks
Jasmin Chantel Howard
Kevin William Kimball
Lauren Ashley Maddox
Woodward Hampton McKee
James Griffith McLeod
Oumou Kalsoum N'Dour
Amanda Milagros Rodriguez

* *Indicates degree with distinction based on grade point average.*

** *Indicates degree with highest distinction based on grade point average.*

\+ *Indicates Honors recipients.*

++ *Indicates Highest Honors recipients.*

Carina L. Saavedra
Robert Cooper Smith
Samuel Forrest Williams
Pearce Paul Wurthner-Labrecque

Psychology
Devon Lehn Abdo
Alexandra Maxwell Armor**
Kassindra Alexandria Arnet
Rebecca Lynn Bennett
Briley Irene Brand
Kimberly Parker Carroll
Margaret Ann Cavanaugh
Rachel McQueen Chaney*
Monica Nwamaka Chioke
William Caldwell Clement
Andrea Laniece Cole
Tori Neshelle Darby
Martin Christoph Eiler
Theresa Flores
Tamra Franklin
Lendra Abril Gause
Sharay Danielle Griffin
Ayat Gamal Ali Hamza
Michelle Elizabeth Hardin
Isabel Alegria Hernandez
Laquinta Yvonne Holloway
Rachael Ann Kelly**
Lauren Elizabeth Kennedy
Lauren Michelle Krimminger
Christina Gayle Layden
Amanda Nicole Litwak
Lyndsay Michelle Mahaffey
William Lester Marion II
Marin Elisabeth Matchinske-Brehmer
Holli Marie McClendon
Kyung Hwan Min
Samantha Louise Nau
Nadia Paige Phipps
Tachae Precious Pone
Stephanie Brooke Royal
Lindsay Cheyenne Short
Kimberly Mason Smith
Rebecca Ann Smith
Makenzie Katlin Snyder
Molly Sarah Staton
Tasha Niccole Thaxton
Solana Rai Wild
Anna Sullivan Williams
Haley Dawn Williamson

Public Policy
Lakesha Nichole Buckner
Veronica Joyner
Madison Averi Swofford**
Adam Thomas Tucker

Religious Studies
Eugene M. Kirzhner

Romance Languages
Alice Lynn Athey
Mary Hunter Benton
Zaki Krishan Dard
Rachel Mae Dickinson*
Nihad M. Mansour*+
Virginia Ellen Miller
Michelle Erin Pujals*
Stacey Kathleen Robison
Tasha Niccole Thaxton
Irene Valentina Ziri

Sociology
Rose Marie Combs*
Angela Fleming Cotton
Joyelle Autumn Gordon
Margaret Grace Hatcher
Michele Baker Hewitt
Cassandra Leigh McMillan*
Hector Luis Ramos III
Zina Marie Scott-Payne
Millicent Danielle Sessoms
Percia Leelonda Swift

Studio Art
Devon Lehn Abdo
Katherine Anne Kombol
Michela Jean Wagner*

Women's Studies
Ashlea Marie Carver
Bridgette Alexis Evans
Kyung Hwan Min
Tonja Senora Tolliver

BACHELOR OF FINE ARTS
Katherine Francis Bobeck
Anna Wrenn Morton*
Jonathan David Rollins*
Gabriele Eugenia Seider

BACHELOR OF MUSIC
Anna Kristen Barney
Ryan M. Dickey*

BACHELOR OF SCIENCE

Biology
Mohsin Mazhar Ali
Brennan Alexis Allen
Mary Hunter Benton
Lauren Asheley Bonura
Dalton Peter Brooks III
Austin Joseph Chambers
Zaki Krishan Dard
Patrick Stuart Edmundson
William Franklin Exline
Albert Thomas Ferguson
Abigail Tuazon Gonzales
Cali Corrine Huffstickler
Nicholas Joseph Masciello
Drashti Ashvinkumar Patel
Pratik Suresh Patel
Geordan Clark Stroud
Adam Scott Turner
Sai Yang
Michael Yim
Jessie Weikang Zhang*

Computer Science
Joshua Allen Bancroft
Sean T. Crews*
Denver Zachary Davis
Samuel Eric Neuspiel
Saikrishna Vennam

Environmental Sciences
Molly Chapin Bost
Dylan James Greenleaf*
Xie He
Hayley Elizabeth Vatcher

Geological Sciences
Becky Mary Belle Emmons
Katlin Elizabeth Howard
Hayley Marie-Elizabeth Irick
Laura Storey Pianowski+
John Drew Burett Stephens
Jennifer Lynn Todd
Samuel Joseph Smail Wright

Mathematical Decision Sciences
Sealy Marguerite Cross
Philip Evan Laganis
Cassandra Leigh McMillan*
Alissandra Nicole Rodriguez

Mathematics
Michelle Uchenna Ajumobi
Zachary Cannon Allen
Brian John Cristante*
Daniel Thomas Gillis
Xie He
Bryan Patrick Lloyd

Psychology
Mathew Akira Adam-Houser+
Megan N. Cairns
Michael I. Chen
Ziqiang Cheng
Mai Nhu Doan
Shaunte' Renee' Ekpo-Otu
Samuel Wyatt Ewing
David Boyce Gillespie Jr.
Heather Simone Kizer
Brittany Gayle Knight
Suzanne Le
Tiffany Yunha Lee
Ryan Chase Reynolds Macaione
Nicholas Joseph Masciello
Drashti Ashvinkumar Patel
Dawid Dewet Smith
Jacob Leonard Speaks
Eliott Ricardo Torres
Janelle Elizabeth Vecin
Mao Yang
Jessie Weikang Zhang*
Zhe Zhou
Morgan Patricia Zoellner

The Kenan-Flagler Business School

ESTABLISHED 1919
Interim Dean John P. Evans

BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION
Nicholas Kyle Faruque*
Ian William Gawronski
Brian Andrew Gray
Byeong Hee Jang
Kevin Joshua Rowsey II
Alec Harris Rubenstein*
Xiangying Wu*

The School of Dentistry

ESTABLISHED 1949
Dean Jane A. Weintraub

BACHELOR OF SCIENCE IN DENTAL HYGIENE
Daniella Bejarano
Jessica Ann Cathey
Skyler McKenzie Lagcher*

The School of Education

ESTABLISHED 1885
Dean G. Williamson McDiarmid

BACHELOR OF ARTS IN EDUCATION
Omar Emmanuel Currie
Katherine Michelle Langdon
Madeline Elizabeth Morgan
Virginia Robin Wilson
Cheyenne Amanda Solorio
Miah Brione Williams

The School of Information and Library Science

ESTABLISHED 1931

Dean Gary Marchionini

BACHELOR OF SCIENCE IN INFORMATION SCIENCE

Jonathan Peter Bartel
James Westley Cox*
Mary Elizabeth Peterson*
Paula Lynn Seligson*

The School of Journalism and Mass Communication

ESTABLISHED 1924

Dean Susan Robinson King

BACHELOR OF ARTS IN BUSINESS JOURNALISM

William Leighton-Armah

BACHELOR OF ARTS IN JOURNALISM AND MASS COMMUNICATION

Faranak Shahsavar Amiri
John Andrew Couch
Sara Elizabeth Cowell
Carissa April Davis
Shar-Narne' Lefleur Flowers
Tamara Gavric*
Erica Leigh Heller
Ahna Rebekah Hendrix
Mary McAllister Holland
Nicholas Cameron Johnson
Catherine Elizabeth King
Avery Jessa Chapnick Kleinman
Benjamin Andrew Long
Wallis Faith McElroy
Kathryn Helen Moore
Hyojin Oh
Katherine Mary O'Neill
Jordan Edward Powell
Dawn Christine Sesta*
Courtney Lane Van Dyne
Janelle Elizabeth Vecin
Javier Mauricio Villarreal
Jordan Kennerly Weir
Anna Nicole Whitehouse

The School of Medicine

ESTABLISHED 1879

Dean William L. Roper

BACHELOR OF SCIENCE IN RADIOLOGIC SCIENCE

Brandon Michael Tracy

The Gillings School of Global Public Health

ESTABLISHED 1939

Dean Barbara K. Rimer

BACHELOR OF SCIENCE IN PUBLIC HEALTH

Rasagna Kosaraju
Mary Rebecca Shen*++

* *Indicates degree with distinction based on grade point average.*

** *Indicates degree with highest distinction based on grade point average.*

\+ *Indicates Honors recipients.*

++ *Indicates Highest Honors recipients.*

THE UNIVERSITY SEAL

The University seal typically appears on diplomas and graduation materials, grade transcripts and documents that indicate accomplishment in or on behalf of the University. The first seal of the University of North Carolina, designed in 1790, showed the face of Apollo and his emblem, the rising sun, used to symbolize the dawn of higher education in the state. The words "sigul universitat carol septent" (Seal of the University of North Carolina) surrounded the drawing. A modification in 1895 added lighted torches of learning beside Apollo's profile. Two years later another alteration replaced Apollo's head with a shield on which the words Lux (light) and Libertas (liberty), separated by a white band running from the upper right to the lower left of the shield, appeared. In the 1940s, some observers mistakenly claimed the white stripe on the shield was a bend sinister, a heraldic code that was demeaning. In truth, the stripe was a bar sinister and merely denoted a second or later son. Still, the direction of the stripe was reversed, removing any question of stigma. Today's seal is the same as the 1897 version, except the stripe runs from the upper left to the lower right.

The English version of the University seal, pictured at left, appears on the stole that may be added to the bachelor's gown.

CERTIFICATES

August 2013

Undergraduate Certificates

The Gillings School of Global Public Health
ESTABLISHED 1939
Dean Barbara K. Rimer

CERTIFICATE IN COMMUNITY PREPAREDNESS AND DISASTER MANAGEMENT
Justin Linwood Gibbs
Jayson Kelley Griffin
Douglas Errick Remer
Guy Valente
Donna Britt Wright

Postbaccalaureate Certificates

The Gillings School of Global Public Health
ESTABLISHED 1939
Dean Barbara K. Rimer

CERTIFICATE IN CORE PUBLIC HEALTH CONCEPTS
Elizabeth Piazza Chase
Kimberly Dianne Clement
Amy L. Cuni
Eric Phillip Deloso
Andrea Noel Halverson
Michael Joseph Kingberg
Meredith Alexis Kirk
Elizabeth Lane Ringer
Shannon Melissa Sullivan
Stephanie Marie Tepperberg
Laurel Duckett Voelker
Kerri Ann Ward
Holly Elizabeth Wenger
Amy Elizabeth Woodrum

CERTIFICATE IN FIELD EPIDEMIOLOGY
Margaret Hercules
Matthew Copeland Simon
Jiangmin Xu

CERTIFICATE IN GLOBAL HEALTH
Louise Rambo King

CERTIFICATE IN MATERNAL AND CHILD HEALTH LEADERSHIP
Deborah Keith Doolittle Day
Blair Elizabeth Nell

COMMENCEMENT COMMITTEE

Ronald P. Strauss, *Chair*
Valerie Ashby
Tiffany Bailey
Kiran Bhardwaj
Bridget Baucom
Angelyn (Angie) S. Bitting
Tony Botros
Jeanette (Jan) Boxill
Anne K. Bryan
Jill Hartman Crowder
Christopher Derickson
Douglas S. Dibbert
Joseph S. Ferrell
Jeffrey W. Fuchs
George B. Hare
Deborah L. Hawkins
Christopher Lambden
Leslie S. Lerea
Karen Moon
Laura Hayes Morgan
Jacob Morse
Valerie A. Price
Erin C. Schuettpelz
Jane C. Smith
James I. Spurling
Frederick N. Stipe
Sidney W. Stone
Charles Streeter
Georgia Walker

Credits

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